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ABSTRACT

This unit is designed for students in grades 7-12 and can be adapted for individual settings. The unit provides student-centered instruction in geography through content specific teaching strategies. The unit is divided into five sections with lessons in each section. Sections include: (1) "Basic Perspectives"; (2) "Cultural Perspectives"; (3) "Economic Perspectives"; (4) "Environmental Perspectives"; and (5) "Political Perspectives." A 26-item annotated bibliography concludes this unit. (EH)

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GEOGRAPHIC PERSPECTIVES

Center For Teaching International Relations
University Of Denver
Denver, Colorado 80208
ISBN: 0-934804-82-5

GEOGRAPHIC PERSPECTIVES

BY HEIDI HURSH, RON SCHUKAR AND BARRY DEAN SIMMONS

CONTENT-BASED ACTIVITIES

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INTRODUCTION

The need for students to understand the geographical features, relationships, and problems of the world in which they live has never been greater. Geography has surely become one of the "content essentials" of education in the United States in the late stages of the twentieth century. While there is little argument about the importance of geography literacy, there is much debate about how geography should be organized, what should be taught, and the best ways to teach it.

In developing this book, Heidi Hursh, Barry Simmons, and I have tried not to get caught up in this debate. While we are aware of and appreciate the Five Themes approach to geographic organization and instruction, and while we have been carefully following the National Geography Standards project, we were not greatly influenced by them. This is not to say that what you find between these covers does not "fit" into these structures and frameworks, because surely it does. Rather we suggest that we did not start with these structures nor did we continually cross-reference our material back to them. We leave that to those of you who are interested in such things.

The guiding principle behind this project is student-centered instruction in geography. Based upon our collective classroom experience of some fifty years, we have developed a series of highly engaging, content specific, teaching strategies. Our choice to organize the book into five basic perspectives, and the selection of the various topics, themes, concepts, and issues, is based on our experience and interest. It is also based on what we think we know about teacher and student needs and interests. We sincerely hope that if you choose to use the materials in this book, they will assist you in making a difficult job easier. Most of all, we hope that these materials will help students learn and internalize some of the basic geographic principles essential to understanding and participating in the complex and interdependent world of today.

Ron Schukar
Parker, Colorado
February 1994

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SECTION 1

BASIC PERSPECTIVES

Activity 1.1 Geography: The Big Picture

In this activity, students work in groups to examine their perceptions and knowledge of geography by drawing a map of a country of their choice, comparing their map to a published map of the country, and then redrawing the map and conducting and reporting geographic research about the country.

Activity 1.2 Who is a Geographer?

In this activity, students work in small groups to explore the role of the geographer. Together, they evaluate five biographical sketches to determine whether the individual fits their definition of a geographer.

Activity 1.3 The Geographer in History

Students develop posters representing the "world views" of the six geographers identified in Activity 1.2. In addition, students assess the impact of each individual geographer on history, and examine how the role of the geographer has changed through history.

Activity 1.4 Be a Geographer

In this activity students explore different types of geography, choose a geographic topic to investigate in the school or community, and then conduct and report the results of their geographic investigation.

Activity 1.5 Geographic Literacy

In this activity, which is based on Cultural Literacy: What Every American Needs to Know, by E.D. Hirsch, Jr., students assess their level of geographic literacy. In addition, from the perspective of citizens of other countries, students write a series of geographic literacy questions for "their" country and then test other student's level of literacy about that country.

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Activity 1.1 **Geography: The Big Picture**

Introduction

As one listens to the ever present debate about what students do not know, or are not learning from their formal educational experiences, geography is almost always one topic or subject area mentioned. In journals, the popular press, and the news media, students are consistently singled out for their failure to understand the geography of the world in which they live.

In this activity, students are provided an opportunity to explore the many dimensions of geography. In addition, students learn basic geographic concepts and resources. The activity also allows the teacher to assess the level of geographic understanding of the students.

Objectives

Upon completion of the activity, students will be able to:

- Identify a broad range of geographic concepts and themes.
- Understand some of the interrelationships that exist between geographic concepts and themes.
- Be familiar with several sources for seeking geographic data and information.

Grade Level

7-12

Time

Two to three class periods

Materials

Large sheets of poster or butcher paper
Felt tip markers
Scissors
Masking tape
Handout 1.1.1, "Geography: "The Big Picture"
Geography resource materials such as books, atlases, computer programs, and so on

Procedure

1. Begin the activity by instructing each student write a definition or description of GEOGRAPHY. (Geography is the study of the world in which we live including physical environment, and people and the way they live and interact with their environment. The five basic themes of geography are location, place, human-environmental interactions, movement, and regions.)

2. Ask students to read some of their definitions or descriptions. List the five basic geographic themes on the chalkboard. Ask students to identify at least ten reasons why geographic understanding is important to our lives. List the reasons on the chalkboard.

3. Divide students into small groups of four to five students each. Provide each group with a large piece of poster or butcher paper, a pair of scissors, and a felt tip pen. Explain that without looking at a map of the world, each group must choose a country in the world

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(excluding their own) and draw a large boundary picture of that country. After students have completed their pictures, instruct them to cut out the picture of their country and to tape it to a wall. Instruct them to put the name of their country on their pictures.

4. Next, instruct students to fill in their pictures with as much real geographic information as they can. For example: cities, unique land forms, mountains, rivers, lakes, and other physical features. Ask students to suggest what the climate is like, the resources available in the country, and how the resources, climate, and physical features have influenced the lives of the people who live in the country.

5. After students have completed the assignment, have them post their pictures in the classroom. Explain that they will be provided time to check out their perceptions and information. Tell them that, in their groups, they should find a map of their country. With the help of the map, ask them to redraw the picture of their country on another piece of poster or butcher paper. Once the second boundary picture has been completed, instruct them to fill in cities, unique land forms, mountains, lakes and other physical features. Have students hang the second picture next to the first.

6. Provide each student with a copy of Handout 1.1.1. Tell students that they should conduct research on their country paying special attention to the topics listed on the handout. Suggest that students begin their research by looking in geography books, a world atlas, the World Almanac, or various computer software programs such as World Atlas, Mac Globe, or PC Globe.

7. After students have completed their research, ask them to fill in the maps of their countries with any additional appropriate information. Provide each group no more than five minutes to make a presentation to the rest of the class about their country.

8. Conclude the activity by discussing the following:

- How do you think the physical features of the country you researched influenced the history and cultures of the people of the country?
- In what ways do you think the quality of people's lives are related to the geographic conditions in which they live?
- How is the study of geography a study of various relationships and interconnections? What are some xamples from your research?
- What have you learned about geography from this activity?
- List at least ten reasons why geographic understanding is important to our lives.

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Geography: The Big Picture

Directions: As a group, research the following topics for your country. Look at a variety of resources including geography books, atlases, almanacs, computer programs, and journals and periodicals. After you have completed your research, prepare a five minute presentation on your country.

Climate

Terrain

Natural Resources

Land Use

Environment

Population

Urban and Rural Populations

Population Growth Rate

Birth Rate

Life Expectancy

Health

Gross National Product per capita

Labor force

Exports

Imports

Industries

Agriculture

Energy Resources

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Activity 1.2 **Who Is A Geographer?**

Introduction In this activity students explore the role of the geographer by evaluating five biographical sketches to decide whether the individuals fit their definition of a geographer.

Objectives Upon completion of the activity, students will be able to:

- Define the role of a geographer.
- Evaluate biographical sketches to determine whether or not each fits their definition of a geographer.

Grade Level 9-12

Time One class period

Materials Handout 1.2.1, "Who Is a Geographer?"

Procedure

1. Introduce the activity by asking students to review the following roles of social scientists: historian (studies records of the past), economist (studies ways in which resources are distributed and used), and psychologist (studies behavior of individuals and groups). Each of these professions has a well-defined role. However, throughout history there has been disagreement about the true role of the geographer. The word geography comes from ancient Greeks (geo = land, graph = study).

2. Ask students, in small groups of three to five, or as a class, to come up with a working definition of a geographer. Encourage them to list specific criteria to be used to determine whether or not a person is a geographer. Share and discuss definitions, arriving at a class consensus. Write the definition, including specific criteria, on the board.

3. Distribute copies of Handout 1.2.1. Direct students to read each biographical sketch, circling words or phrases that relate to the criteria, and deciding whether or not the person is a geographer. This may be done individually (in class or for homework), or by small groups discussing their decisions together.

4. As a class, discuss each of the people on the handout, citing specific evidence that supports or refutes the claim that he is a geographer. Refer to the criteria developed in the class definition if individuals and groups do not agree, ai discuss why they applied the definition differently.

5. Debrief this part of the activity by asking the following questions:

- What is a geographer's "laboratory?"

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- Does a geographer spend more time in the field or in an office? Why?
- Who does the geographer teach?
- Are all explorers geographers? Why or why not?
- Are all geographers in some way explorers? Explain.

6. Would you classify the following as geographers? Why or why not? If not, do they fit one or more of the criteria? (Choose those that your students have studied and/or know as general knowledge.)

- Christopher Columbus
- Matthew Perry
- Neil Armstrong
- Lewis and Clark
- Alexis de Tocqueville
- Napoleon Bonaparte
- Julius Ceasar
- Alexander the Great
- Figarro

7. Conclude by suggesting that each student has at some time also played the role of a geographer, formally (as in school) or informally (i.e., taking part in a debate on a new shopping center in your community). The distinction is that a geographer deals with issues related to humans and their environment in an organized analytical manner.

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Activity 1.3 **The Geographer In History**

Introduction

In this activity students will discuss the impact of geographers on world history. Geographers are seen not only as contributors to the academic store of knowledge about the world, but also as transmitters of images and information to the general public.

Objectives

Upon completion of the activity, students will be able to:

- Compare the world views of each person.
- Analyze the impact of each person's work/discoveries on world history.

Grade Level

5-12

Time

One class period

Materials

Handout 1.2.1, "Who Is a Geographer?"
Wall map of world
World history time line or world history text
Newsprint
Colored pencils/markers

Procedure

Part A:

1. To learn more about the six people outlined in Handout 1.2.1, draw a time line on the chalkboard, placing each person in the correct time period. Divide students into six small groups. Assign one of the six people to each group.

2. Using a world history time line or world history text, ask each group to add three to five other events to the time line that occurred during the period when each person lived. Tell them to choose events that are related in some way to the person's life and/or discoveries. (These may be causes, effects, or contemporary events or developments.)

3. Distribute pieces of newsprint and ask each group to draw a map illustrating the world view of their assigned person. They should base their map on information from the biographical sketch, time line, and/or personal knowledge. Explain that a world view not only refers to their concept of the map of the world but also their images and beliefs. For example, is the world flat? Round? What continents does it include? How do they "see" those places? Encourage them to add drawings to the map and to give it a title, summarizing the world view of that person.

4. Instruct each group to display its world view poster in chronological order. Discuss how the world views changed throughout history and how an individual's experience affects his/her view of the world.

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Part B:

1. Individually, or in the same small groups, ask students to draw conclusions about the impact each person and his discoveries/ writings had on world history. Tell them to use the time line and/or world history text if necessary. Share individual or group conclusions in the class discussion. Point out the role of the geographer in public education and as an influence on public opinion/images of the world and of other cultures.

2. Ask students to react to the following statement "The geographer is the most influential of all social scientists." Encourage students to use specific examples to support or refute the statement.

3. Conclude by discussing how the role of the geographer has changed throughout history. Ask the students: What kinds of issues do you think geographers will be studying in the future?

Follow-Up

Cut out the five biographical studies and laminate them. Use them for an interest center or small group activity in which students may be asked to do one or more of the following thinking skill tasks:

a. Classify the "geographers" according to categories students set up.

b. Compare two of the geographers based on one or more criteria.

c. Write a dialogue between two of the "geographers," emphasizing the similarities and differences in their experiences and worldview. (synthesis)

d. Using a time line and/or world history text, list things that one of the "geographers" could teach another, based on the geographic knowledge at the time when each lived. (analysis)

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WHO IS A GEOGRAPHER?

Read each of the biographical sketches to decide if the person described could be called a geographer. Circle words or phrases which relate to the criteria listed in your definition.

1. **Herodotus** c. 484? - 424? B.C.

A Greek historian, born in Helicarnassus in what is today the nation of Turkey, traveled through much of the known world* in the fifth century B.C. Herodotus is generally regarded as the "Father of History," although much of his writing was about the cultures and physical geography of the places he visited, including the settlements around the Aegean Sea, Southern Italy, Babylonia, Egypt and the Black Sea. His descriptions were based on careful observation and on the stories he was told by people he met. Much of what Herodotus wrote has proven to be amazingly accurate; it is the most detailed picture of the world of the time that has survived.

Herodotus described the world as consisting of three land masses--Asia, Europe, and Africa (which he referred to as Libya). He did not know about the British Isles or Scandinavia, and his concept of Asia ended at India. Unlike some other Greeks, Herodotus did not think that the land mass of Asia, Africa, and Europe was a circle. He viewed it like a rectangle with longer distances from east to west than from north to south. Although he had heard that it was possible to circumnavigate Africa, he knew little about southern Africa and thought that the southern tip of Africa was near Aden (on the Red Sea). The Nile River, according to Herodotus, began in West Africa, flowed south and east before it turned north to pass through Egypt. Herodotus's descriptions of the known world were read by many scholars during the time of the Greeks and Romans, the Middle Ages, and the Renaissance. His work has often been used as the baseline, or earliest reference, about cultures and places around the Mediterranean.

2. **Claudius Ptolemy**. Second century A.D.

Born in Egypt during the time when Alexandria was the center of learning for the Mediterranean, Ptolemy was the leading scientist at the Alexandria library. A mathematician (principles of trigonometry), astronomer (believed the earth was round, but that the sun revolved around the earth), and mapmaker, he also wrote about music and optics. His two most famous books, Almagest (on astronomy) and Geographia recorded much of the collected knowledge of the ancient world on these subjects. Included in his Geographia a world map, numerous regional maps, and a list of 8000 locations that became the basis for the maps used centuries later by explorers such as Columbus. Ptolemy stressed the importance of scale, direct observation, and measurement. To locate places on a map, he used longitude and latitude lines, although his measurements of longitude have been found to be inaccurate because they were often based on estimates of travel time.

Ptolemy believed that the east-west dimensions of the inhabitable earth were greater than its north-south dimensions. Because his map showed the width of Europe and Asia longer in degrees of longitude than it actually was, explorers later underestimated the distance of the

*The world as it was known to the Greeks and other cultures around the Mediterranean, not necessarily the Chinese and other cultures which were developing independently.

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westward sea route to Asia. His world map consisted of three continents--Europe, Asia, and Africa, with an unknown land south of the Indian Ocean which connected southern Africa with eastern Asia, creating an inland ocean. (This error caused explorers later to think that it was impossible to reach Asia by sailing around Africa.) Ptolemy's map included Great Britain and Ireland, and Scandinavia was shown as an island. He showed little knowledge of the west coast of Africa or lands below the equator, but he did correctly draw the source of the Nile from two lakes at the foot of what he referred to as the Mountains of the Moon. Locations in China (called Sinae) along the Silk Route were included, although he incorrectly drew the coast of China extending down to the unknown land south of the Indian Ocean. Ptolemy's Geographia had great influence not only on Europeans in the Renaissance, but also on the development of Arabic learning during the Middle Ages. His maps and text were copied, with modifications, into the sixteenth century.

3. **Marco Polo**. 1254? - 1324? A.D.

A Venetian merchant, Marco Polo, left Venice in 1271 to travel to China with his father and uncle, who had previously met the great Kublai Khan and were on a mission to his court in Cambalac (near what is now Beijing). Marco Polo was only seventeen when he left, but would not return until 1295, twenty-four years later. After an overland journey through what is now Persia, Afghanistan, and western China, the Polos reached Cambalac in three and a half years. Kublai Khan was impressed with Marco and appointed him an advisor, sending him on missions throughout his empire, and making him governor of a city in eastern China. As Kublai Khan aged, the Polos worried about their future and received permission to leave, returning home by a sea route which took them through what is now Southeast Asia.

On his return to Venice, Marco Polo wrote one of the world's most famous travel books, later read by (among others) Columbus and Henry the Navigator. He was the first person to describe a journey across the whole width of Asia, including the flora, fauna, topography, sociology, and politics. He gave details on the construction of Chinese junks, which would become some of the most seaworthy ships. As a merchant he offered much information on trading possibilities. Among the places he described were Persia, China, Siberia, Tibet, Burma, Laos, Siam (Thailand), Cochin China (Indochina), Japan, Java, Sumatra, Ceylon, and India. Although Marco Polo's book created great excitement among the public at large and his information was included on most fourteenth century maps, the geographers of his day did not recognize his contributions and doubted much of what he said. However, the Polos had a strong influence on the development of Europe's ties with Asia and their information on the spices of Southeast Asia give impetus to later exploration.

4. **Gerhard Mercator**. 1512 -1594 A.D.

Mercator, one of the best known cartographers, was born near Antwerps, (modern-day Belgium) the son of German parents who had moved to Flanders. His real name was Gerhard Kramer, but he used the Latin form (Mercator) when he became a scholar. Mercator studied philosophy, mathematics, and geography at the University of Louvain. He became known for his practical skills, constructing globes, sundials, astrolabes, and other scientific instruments, and engraving maps and charts.

Mercator's most famous maps, his large map of Europe (1554) and his world map (1569), reflected improvements in geographic information as well as new techniques in mapmaking. The European map corrected the length of the Mediterranean and used more

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accurate latitudes. It soon became a bestseller in Europe. The world map, based on the new information derived from explorers, was more accurate along coastlines than in the interior of continents. It showed six continents--Europe, Africa and Asia (the old world); North and South America (labeled India Nova); and the southern continent (Continentis Australis) which included Tierra del Fuego (actually the southern tip of South America) and stretched to the east as far as New Guinea. The width of North America was exaggerated, but its east coast, the Caribbean, and the coast of South America were reasonably accurate. Another feature of the map, which influenced exploration, was that it seemed to show a Northwest passage to Asia. Asia included Mongul (Mongolia), Cathay (China), Thebet (Tibet), and Indostan (India). The coastline of Southeast Asia and the outlines of the islands were quite accurate because they were based on the records of Portuguese explorers as well as Marco Polo. Because of the numerous journeys by the Portuguese and others around Africa, its shape was also accurately drawn, although the source of the Nile River was shown much too far to the south. The most famous feature of Mercator's map was its projection, which came to be known as the Mercator Projection, and is still used in modified form on some maps today. Mercator wanted to draw a projection which would make it easier for navigators to plot a ship's course. He made lines of longitude and latitude intersecting at right angles. Although this projection made navigation easier, it distorted the size of land areas away from the Equator. Near the end of his life, Mercator published a collection of maps calling it an "atlas," the first time that term was used. During Mercator's time, Amsterdam became the center of cartography in Europe. Dutch pilots routinely turned in their charts after a voyage and they were used to correct maps. The achievements of cartography enabled the explorers to rapidly expand the European "world."

5. **David Livingstone**. 1813 - 1873 A.D.

David Livingstone, African missionary and explorer, was born near Glasgow, Scotland, the son of a traveling tea vendor. At the age of ten he began working in a cotton mill, studying in his spare time. His dream of becoming a missionary to China led him to go to medical school and become an ordained minister. When he had completed his training in 1840, the Opium War was going on in China, so he went instead to southern Africa. For eight years he worked as a missionary, founding new missions farther and farther inland. On one of his trips to the interior he met a group of slave traders, an event which changed his life. He believed that if he could open up the interior of Africa to commerce, the slave trade would decline. Livingstone's first expedition, 1500 miles across southern Africa won him celebrity status back in England, where people read his letters with great interest. On his second trip, Livingstone saw a magnificent waterfall which he named Victoria Falls, after the Queen of England. In 1858 he cut his connections with the London Missionary Society; after that his explorations were supported by the British government and the Royal Geographic Society. Of Livingstone's many "discoveries" in Africa, his most famous were Lake Nyasa (Malawi) and the upper reaches of the Zambezi and Congo Rivers. He was a courageous explorer who endured severe hardship and illnesses and had a deep commitment to ending slavery. His letters contained many details about the physical geography of the lands he explored, though his attitude toward the cultures was often ethnocentric. He was frequently critical of African customs and institutions, expressing the belief that their weaknesses could be remedied with a strong dose of European civilization.

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Livingstone was seen as one of the heroes of Victorian England. After his death in 1873 his heart was buried in Africa and his body brought back to be interred in Westminster Abbey. His greatest impact on nineteenth century England was through his writings and speeches.

His letters included many details of the land and people, which showed that the interior of southern Africa included fertile areas with sufficient rainfall for agriculture and skilled farmers, craftsmen, and traders. Livingstone, who traveled over 30,000 miles on his explorations (mostly on foot) helped to stimulate interest in Africa on the part of British explorers, merchants, and settlers.

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Activity 1.4 Be A Geographer

Introduction

There are many types of geographers and geographic activities. For example, an economic geographer studies the spatial distribution and interaction of economic activities. Some of the activities an economic geographer might be engaged in include evaluating transportation systems and costs in a certain region; studying the effects of a new technology on an environment; and studying the flow of resources to various markets. A political geographer studies the spatial dimensions of political units. A political geographer might study boundary disputes, or the impact that a physical environment has on political life in a certain nation or region. In this activity, students become a geographer by examining several types of geography, choosing a geographic topic or problem to investigate, and then conducting a geographic investigation in their school or community.

Objectives

Upon completion of this activity, students will be able to:

- Identify broad topics of geographic study and investigation.
- Understand through experience at least one function or role of a geographer.

Grade Level

9-12

Time

Two to three class periods
Time outside of class for student investigations

Materials

Handout 1.4.1, "Geography - The Study of Where and Why"
Handout 1.4.2, "Be A Geographer"

Procedure

1. Introduce the activity by telling students that there are many types of geographers and numerous areas of geographic study and practice. Ask students to identify different types of geographers. List the different types of geographers on the chalkboard. (See following note to teacher.)

Note to Teacher

It is important that students understand that there are two main divisions of geography: physical geography and social geography. Remind students that physical geography focuses on natural features such as landforms, water bodies, climate, vegetation, and geologic events. Human geography is concerned with culture, and the study of the political, economic, historical, and social aspects of human life. Geographers often specialize in physical geography, political geography, economic geography, cultural geography, urban geography, historical geography, and so on.

2. Ask students to suggest what each of the geography specialists identified in step 1 study and do. For example, what does an economic geographer study and do? List the suggested functions on the chalkboard under each of the geography specialists.

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3. Provide each student with a copy of Handout 1.4.1, "Geography: The Study of Where and Why." Review the information on the handout and compare the information to the suggestions made by students in step 2 above.

4. Explain to students that in the remainder of the activity they will select and investigate a geographic problem. Tell them that they will be provided an opportunity to become a geographer in order to better understand what geography is and how geographers perform their work.

5. Provide each student with a copy of Handout 1.4.2, "Be a Geographer." Instruct them to read the directions, and answer any questions they might have.

Note to Teacher

This part of the activity will take students out of the classroom and into the school and/or community. The nature of each investigation will determine the length of time needed to accomplish the task. You may want to make the assignment, and provide students a set amount of time, i.e., two weeks, in which to conduct and conclude their tasks. You also may want to think about a format for student presentations and how much time you want to devote to the presentations. The directions on Handout 1.4.2 strongly suggest that students communicate regularly with you about their investigations. You may want to establish a means of monitoring each student's progress. The process of investigation outlined on Handout 1.4.2 is only a suggestion. You may want to design your own process or add to the list of suggestions found on the handout.

6. After students have completed and presented their geography investigations, conclude the activity with a discussion of the following:

- After participating in the activity, has your view of geography changed? How? Why?
- In what ways do geographers contribute to creating greater harmony between people and their environment?
- What are some of the most important lessons you learned as a result of participating in this activity?

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GEOGRAPHY - THE STUDY OF WHERE AND WHY

The study of geography is primarily concerned with the locations and relationships of things on earth. Geographers often seek answers to three basic questions:

1. Why are things located where they are? For example, why is a city located where it is?

2. How are things related to each other and to their location? For example, how is crime related to increasing population and to cities?

3. Why is a thing's location important to people? For example, Why is the location of an airport important to the people living in and around the airport?

The following is a short summary of topics that geography specialists study, and jobs that they perform:

- **Physical Geographer**

Studies interactions between people and the landscape such as settlement, mobility, and economic activity.

Studies the interactions between climate and people, including choices of food, shelter, clothing, work, and transportation.

Studies how people adapt to their environment and climate.

Studies the effect people have on vegetation and that vegetation has on people.

Studies natural resources, how and why people consume certain resources, why some resources have value, why people conserve resources.

Studies ecosystems and the interconnectedness of ecosystems that make up the earth's biosphere.

Studies the effects of human activity on ecosystems.

Map Making

- **Cultural Geographer**

Studies beliefs, language, architecture, and other expressions of culture.

Studies impact that culture has on the landscape, and how cultures spread and expand.

Map Making

- **Economic Geographer**

Studies why people in different locations make their livings as they do and how their economic activities relate to those of people in other places.

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Studies geographical features which influence economic activity.

Studies how economic activity defines place. Studies transportation and trade.

Map Making

- **Political Geographer**

Studies natural and political boundaries, as well as boundary disputes.

Studies how boundaries are determined and how they change.

Map Making

- **Urban Geographer**

Studies location and growth of cities, patterns of land use, how cities modify the environment, movement and settlement of people within a city, and the effect that urban living has on the development of individuals and groups.

Map Making

- **Historical Geographer**

Studies historical events in the geographical setting in which events took place.

Studies past geographic patterns as well as a single location through history.

Map Making

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BE A GEOGRAPHER

Directions: Now that you have a better understanding of what geographers study and do, you will be provided an opportunity to conduct your own geographic study. To help you plan and conduct your study, you should consider the steps outlined below. As you work through your investigation, you should communicate continuously with your teacher and feel free to ask questions and advice.

Before you begin, please review the three basic questions asked by geographers and the various topics and problems that geographers study, found on Handout 1.4.1. As you think about the selection of your topic or problem, make sure that it is something that you can realistically investigate.

1. List five possible topics for investigation.

A. _____
B. _____
C. _____
D. _____
E. _____

2. Choice of topic to investigate and reasons for selection of topic.

3. Investigative process

- What are you investigating?
- How will you go about it?
- Who do you need to contact or involve?
- When will you complete your investigation?

4. How can you report the results of your investigation?

5. Assistance you might need?

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Activity 1.5 Geographic Literacy

Introduction

In his book Cultural Literacy: What Every American Needs to Know, E.D. Hirsch, Jr. identifies examples of specific historical events, geographical names, people, literary terms and works, and scientific terms and concepts which, he believes, constitute the shared knowledge of U.S. culture. According to Hirsch, the literate citizen is one who knows and understands these examples. He further believes that this basic information is needed to thrive in the modern world and ought to be the aim of educational programs in the United States today. While the book has been controversial and Hirsch's conclusions have been widely argued, this activity provides students and opportunity to test their "cultural literacy" according to Hirsch, and to develop their own list of "shared knowledge" goals for citizens of other cultures.

Objectives

Upon completion of this activity, students will be able to:

- Evaluate "geographic literacy."
- Develop a list of "shared geographic knowledge" items that could be utilized to evaluate the cultural literacy of citizens from other cultures.
- Understand the similarities and differences between cultures as reflected in "shared knowledge" goals.

Grade Level

7-12

Time

Three class periods

Materials

Handout 1.5.1, "Cultural Literacy - Geography"
Handout 1.5.2, "World Map,"
Handout 1.5.3, "Comparative Cultural Literacy"
World cultures resource materials

Procedure

1. Provide each student with a copy of Handout 1.5.1, "Cultural Literacy - Geography," and a copy of Handout 1.5.2. Tell students about Hirsch's cultural literacy ideas (refer to the introduction section of this activity) and ask them to follow the instructions on Handout 1.5.1.

2. After students have had an opportunity to complete the information on the handout and on the world outline map, ask them to share their answers. Make sure that all students correctly locate the place items on their maps and that they define their terms accurately. Discuss any difficulties that students might have had and some of the reasons for the problems. Ask students to discuss why the terms and places on the handout are included on a cultural literacy goals list for citizens of the United States. Ask students to suggest places or terms that they think should be included on the list. Note the places or terms on the chalkboard.

3. Divide class into small groups of four to five students. Provide each student with a copy of Handout 1.5.3, "Comparative Cultural

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Literacy." Assign one of the following countries to each of the groups: Japan, Pakistan, Kenya, Canada, New Zealand, Guatemala, Syria, or Norway. Instruct the groups to follow the instructions on the handout.

4. Once the groups have researched their country and have designed a twenty-five item geographic cultural literacy goals list, ask each of the groups to share their list with the rest of the class. The class should attempt to define the terms or locate the places on their world outline maps. After all groups have reported, discuss any difficulties the students had in finding the places or identifying the terms on the various lists.

5. Conclude the activity by discussing the following:

- What do the cultural literacy goals' lists have in common? In what ways are they different?
- What do the various lists indicate about the country or culture from which it was designed?
- What are the differences between what a "culturally literate" citizen of one culture needs to know and a "culturally literate" citizen in another culture? What are the similarities?
- What problems, if any, do you find with this particular way of measuring literacy in any culture?

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CULTURAL LITERACY - GEOGRAPHY

Introduction: E.D. Hirsch, Jr., In his book Cultural Literacy: What Every American Needs to Know, identified the following geographical places and terms as indicators of cultural literacy. Please read the following list and test your cultural literacy. For those items listed as place, locate and identify the place on the world outline map that you have been given. For those items listed as terms, define or describe the term on this handout.

1. Term-Acid Rain _____

_____

2. Place-Afghanistan

3. Term-Alaska Pipeline _____

_____

4. Place-Amazon River

5. Term-Balance of nature _____

_____

6. Term-Colonialism _____

_____

7. Term-Continental Drift _____

_____

8. Place-Cuba

9. Term-Developing nation _____

_____

10. Term-Down under _____

_____

11. Place-El Salvador

12. Term-Flood plain _____

_____

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13. Place-People's Republic of China

14. Term-OPEC _____

_____

15. Place-Vietnam

16. Place-Poland

17. Place-Suez Canal

18. Place-Red Sea

19. Term-Precipitation _____

_____

20. Term-Patriarchy _____

_____

21. Place-Persian Gulf

22. Place-Oregon

23. Place-Panama

24. Place-London

25. Place-Lake Michigan

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WORLD MAP

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COMPARATIVE CULTURAL LITERACY

Instructions: In your small group, research your assigned country using the available resources, and develop a twenty-five item geographic cultural literacy goals list that could be used to evaluate the cultural literacy of the citizens of your research country. As you prepare to develop the items, try to first become familiar with the geographical features of the country, cultural and social characteristics of the people, the recent history, and some of the problems facing the country and the people. Your twenty-five items should be a blend of terms and places appropriate to the people of your research country. You may wish to use the items on Handout 1.5.1 as a guide to the development of your own items.

_____ Country

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23 _____
24. _____
25. _____

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SECTION 2

CULTURAL PERSPECTIVES

Activity 2.1 **Where in the World, What in the World, Why in the World**

Students examine a series of pictures and ask and answer the questions where in the world was the picture taken, what does the picture show, and why are the people shown in the picture doing what they are doing? Students learn how physical environments influence lifestyle and compare and contrast their lifestyle to others found throughout the world today.

Activity 2.2 **A Perpetual Tug-Of-War**

In small groups, students examine cultural change, the on-going battle between cultural tradition and cultural change, and cultural change through invention and diffusion.

Activity 2.3 **Just a Game**

In this activity, students examine the geographical concepts of cultural expansion and relocation diffusion by tracing how sports and games spread from culture to culture.

Activity 2.4 **The Sanchia Project**

In this role-play activity, students assess the impact of the introduction of a modern technology on a traditional culture.

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Activity 2.1 Where In The World, What In The World, Why In The World

Introduction

In order for students to understand the relationship between the earth's people and their physical environment, it is essential that they know how patterns of life or culture are partially shaped by geographical factors. In this activity students learn how physical environments influence lifestyle. In addition, students are provided an opportunity to compare and contrast their lifestyle to others found throughout the world today.

Objectives

Upon completion of the activity, students will be able to:

- Understand how geographical characteristics influence the development of culture and lifestyles.
- Understand that many people in the world live their lives differently than do most citizens of the United States.
- Appreciate the quality of life advantages that exist throughout the developed world.

Grade Level

7-12

Time

One to two class periods

Materials

10-12 teacher-selected pictures representing different cultural lifestyle practices, beliefs, or values (National Geographic is an excellent source and check your local secondhand stores or used bookstores for copies.)
Handout 2.1.1, "Where, What, Why"
World wall map

Procedure

1. Collect ten to twelve colorful pictures of various cultural lifestyle practices, beliefs, and values. Make sure that you get a good geographic sampling, i.e., north-south, east-west, hot-cold, wet-dry, etc. Assign each picture a number, write the number on the picture, and make a list of who, where, and what each picture represents. (An example of some pictures that have been used successfully include an African camel train, Amazonian bow-hunters, an Eskimo child, and a Mru-Bangladesh tribesman.) If possible, laminate or make a cardboard background for the pictures.

2. Organize students into small groups of four to five persons each. Distribute a copy Handout 2.1.1 to each group. Select one of the pictures for each group.

3. Give one picture to each of the groups. Ask each group to closely inspect the picture and to decide the following:

- Where in the world was the picture taken?

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- What does the picture represent?
- Why is the activity pictured taking place?
- Ask students to record the number of the picture and their responses to the three questions.

4. Circulate the various pictures among the groups until each has had an opportunity to view all the pictures and to answer the three questions for each picture.

5. Collect the pictures and ask each group to report their responses to the questions beginning with question number 1. Note the answers on the chalkboard. Expect diverse responses to emerge. Some discussion of how students decided on the where, what, and why questions should be held.

6. Once each group has had an opportunity to report their perceptions about each picture, hold up each picture and tell them where the photo was taken, what is taking place in the picture, and why. Using the world map, ask volunteers to locate the place where each picture was taken.

7. Hold up each picture again and ask students to discuss how the geographical features of the area where each picture was taken must influence the activity pictured.

8. Ask students to compare the activities in each picture to the activities that meet similar needs in their lives, i.e., for a transportation picture, how does their general mode of transportation differ from that in the picture? Discuss why the differences exist? Discuss the impact of geography on students' lives.

9. Ask students to provide additional examples of lifestyle activities, beliefs, or values that are influenced by geography.

Follow-Up

As a result of this activity students will identify the many ways in the world today that people meet the same needs. They will also understand that the choice of how to meet a need is often the result of geographic factors. To help further illustrate this point, have students complete a comparison of a single lifestyle activity, such as food preparation, as the activity is carried out around the world.

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WHERE, WHAT, WHY

	Where In The World	What In The World	Why In The World
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

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Activity 2.2 A Perpetual Tug-Of-War

Introduction

Modern cultures are constantly in a state of transition and change. Within every culture there is a perpetual struggle between the forces of tradition, which support established ways of life, and the forces of change, which seek new ways of doing things. In this activity students examine cultural change, and the continual battle between tradition and change in the development and advancement of cultures.

Objectives

Upon completion of the activity, students will be able to:

- Describe the two principle ways cultural change takes place.
- Understand the perpetual struggle between tradition and change in any culture.
- Analyze contemporary cultural struggles involving forces of tradition and change.

Grade Level

9-12

Time

One to two class periods

Materials

Handout 2.2.1, "Cultural Change: Invention and Diffusion"

Procedure

1. Begin the activity by asking students to raise their hands if they have ever participated in a tug-of-war. Ask students to describe the objective of a tug-of-war (for one group to pull another group across a neutral zone into their territory or zone). Ask students who have participated in a tug-of-war to describe why one group might be successful and the other group unsuccessful (strength, numbers, working together, and so on). Finally ask students to describe how it felt to be involved in a tug-of war.

2. Tell students that much like a human tug-of-war, every culture on Earth is involved in a tug-of-war over change. Explain that all cultures require some degree of change in order to advance. Also explain that change does not often come easy because of the tug-of-war between tradition (supporting established ways of doing things) and change which advocates new ways of doing things. Also tell students that the more isolated a culture is, the more the struggle for change, and thus the tug-of war, comes from within the culture. Those cultures that have significant contact with the outside world are more affected by other cultures, and thus the tug-of war more often involves the influence of the outside.

3. Write the following definition of a cultural group on the chalkboard: "A cultural group is composed of individuals who are joined by a sense of belonging, by a distinctive way of life, and usually by the occupation of contiguous territory." Ask students to provide examples of at least fifteen changes that have recently taken place, or are currently taking place, in the lives of the cultural group known as "citizens of the United States." Record the examples on the chalkboard. Next, explain that cultural change

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comes about in two major ways, by invention and by diffusion. Tell students that invention can be defined as a form of technology or an institution. For example, television is a form of technology while women's suffrage is an institution. Diffusion on the other hand, is the transfer of cultural elements from one culture to another as in the case of the introduction of the sport of soccer to the United States.

Note To Teacher Before going on with the activity, make sure students understand about invention and diffusion. You may want to refer to the first and second items from the student list of changes on the chalkboard and ask students to categorize the changes as either invention (technology or institution) or diffusion stimulated.

4. Divide students into small groups of four to five students each. Provide each student with a copy of Handout 2.2.1, "Cultural Change: Invention and Diffusion." Instruct students to read and follow the directions on the handout.

5. After students have completed Handout 2.2.1, bring them back together in a large group to discuss the "change" items still listed on the chalkboard. Ask them to identify the type of change (invention or diffusion) for each of the items, and to discuss if and how each item involves or involved a struggle between those who support tradition and those who support change.

6. Conclude the activity by discussing the following:

- What factors might contribute to one group's success and another group's failure in a cultural tug-of-war?
- Cultural lag occurs when a new technology or institution is postponed because of apathy or resistance by the majority of users. What are some examples of inventions that were not immediately accepted by society but later "caught on" and moved society forward?
- Cultural diffusion is more common in the world today than ever before. Explain.
- What regions of the world are currently experiencing the greatest amount of cultural change and cultural tug-of-wars?

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CULTURAL CHANGE: INVENTION AND DIFFUSION

Directions: In the column labeled CHANGE, record the items listed on the chalkboard that were generated from your discussion of changes in the United States. Next, under the column labeled TYPE OF CHANGE, identify whether the change is the result of invention, diffusion, or both. In the column marked TUG-OF-WAR, discuss and note the struggle which took place or is taking place between the forces of tradition and the forces of change.

CHANGE	TYPE OF CHANGE	TUG-OF-WAR
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

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Activity 2.3 **Just A Game?**

Introduction

Culture is not static, it is continually changing, evolving, and spreading. The spread of culture is commonly called cultural diffusion. Expansion and relocation diffusion are particular forms of cultural diffusion. Expansion and relocation diffusion occur when people carry ideas or ways of doing something to other locations. In this activity, students examine the concepts of expansion and relocation diffusion by tracing how games and sports spread from culture to culture.

Objectives

Upon completion of the activity students will be able to:

- Understand the concepts of expansion and relocation diffusion.
- Describe the many ways expansion and relocation diffusion have influenced the development of culture in the United States.
- Appreciate how life is enriched through cultural expansion and relocation diffusion.

Grade Level

9-12

Time

One to two class periods

Materials

Handout 2.3.1, "Games and Sports: A Case Study of Cultural Diffusion"

Procedure

1. Introduce the activity by asking students to discuss the meaning of the following: "Throughout history, walk, wind, wheel, and the wire have helped shape our lives and given us what we have and know today." (Culture - the knowledge, beliefs, customs, language, and forms of social organization of a group of people are continually being carried from one place to another. Generally when cultures come into contact with one another, each adopts or adapts some element from the "new" culture into their own.)

2. Explain to students that the transmission of culture is known as cultural diffusion. Tell them that they will be examining two forms of cultural diffusion. The first is expansion diffusion, which occurs when new ideas or ways of doing things are transmitted from one location to another. The second is relocation diffusion, which occurs when people move and introduce their culture some other place.

3. Ask students to give examples of elements of culture in their lives that came from some place else through expansion or relocation diffusion, such as food, music, fashion, style, language, and so on. List the examples on the chalkboard.

4. Next, read the following to students: **Concentrate, concentrate, I told myself. I summoned all the power I had in my body. See the catcher's mitt! Put the ball there! Don't think about anything else! I struck out the batter and followed by striking out the next batter too. The threat had subsided. The last batter rolled out to second, and the lead was preserved. I got stronger through the rest of the**

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game. Meanwhile, we upped our lead to 4-0, so that in the ninth inning I found myself pitching with more confidence than ever. With the final out, I got so excited that I threw my glove high into the air, jumping and yelling in celebration. We were the best.

5. Ask students who they think might have written the paragraph and what they think it might describe. (The paragraph was written by a Japanese high school student. He describes playing in a major high school baseball championship game in Japan. The quote is taken from Sadaharu Oh: The Zen Way of Baseball, by Sadaharu Oh and David Falkner.) Discuss students perception of the author and event. Explain that the author was a Japanese baseball pitcher and that he is describing a high school baseball championship game in Japan. Ask students to discuss how this example illustrates the concept of cultural diffusion. Tell them that baseball is often described as the national sport of Japan.

6. Provide each student with a copy of Handout 2.3.1, "Games and Sports: A Case Study of Cultural Diffusion." Instruct students to follow the directions on the handout.

7. After students have completed the activity on Handout 2.3.1, ask them to share their answers. Discuss any differences in their answers. Ask students if they know of other games or sports that have their origins in other cultures. Ask students to summarize how the activity contributes to the understanding of cultural diffusion.

8. Next, instruct students to write a short essay titled: "Cultural Change Through Cultural Diffusion." Have them choose two or three examples of cultural diffusion and discuss how the examples of cultural diffusion contributed to the "receiving" culture.

9. Following the development of the essays, ask students to share some of the examples they wrote about in their essays. Choose one or two of the examples and conclude the activity with a discussion of the following:

- Was each of the examples accepted immediately by the receiving society or was there some cultural lag? Explain
- How did the forces of tradition and change operate in each of the examples?
- Why are geographers interested in cultural change through cultural diffusion?

Answer Key

1. C	6. H
2. F	7. J
3. A	8. E
4. I	9. G
5. B	10. D

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GAMES AND SPORTS: A CASE STUDY OF CULTURAL DIFFUSION

Directions: Below is a list of sports and games, and descriptions and places of origin of the various sports and games. Read the descriptions and places of origin, and then match it to one of the sports or games listed.

A. Skating
B. Baseball
C. Billiards
D. Surfing
E. Bowling
F. Golf
G. Ice Hockey
H. Football
I. Tennis
J. Badminton

1.____ Spain, Italy, France, England, Egypt, and Germany all claim invention of this game. Some believe the Chinese deserve credit, while others report that it was played in Greece in 400 BC. The sport is thought to have begun as an adaptation of croquet to an indoor game. The game became popular in the United States in the early 1800s. Its popularity was helped by the addition of revolutionary new materials to manufacture equipment needed for the game.

2.____ This game is one of the fastest growing games in the United States today. The sport is said to have been played by the Romans, but refined throughout the past 2000 years by the Scots. The original game was played with a feather-stuffed ball and a bent stick.

3.____ This sport is said to have originated out of necessity in the Scandinavian countries. The sport was refined by the Dutch, the Scots, and the Icelandic peoples. The equipment first consisted of deer ribs and hide. Later, highly polished wood, and then iron were used in making the basic equipment. Several varieties of the sport have been created since the introduction of the sport in the 1908 Olympics.

4.____ This sport arrived in the United States in 1874. Some historians trace the origin of the game back to Egypt, while others say that the game was played by the Greeks and Romans. The modern game came from France and England. Once a game exclusively for aristocrats and known as the game of kings, it is now pursued by a public bent on playing it with the agility, grace, and coordination it demands. Men originally passed the game off as a "sissy's" game. Today it is played by both women and men, indoors and outdoors.

5.____ The modern variety of this game originated in the United States in the 1840s. It is said to have been played earlier by Native Americans and definitely has a connection to a similar type of game found in England that was introduced to the colonies in 1751. This game, known as "America's pastime," has found it way all over the world. Nowhere is the game more important than in Japan where one finds such teams as the Hiroshima Carp.

6.____ This sport originated in England in 1823. The first organized game was played in the United States in 1869. In most countries, this sport is called soccer, which dates back to the 1600s. Originally, this sport was played as rugby, which survives in its own right, but not at the level of importance as this "American" sport. Today the sport is becoming popular in Europe and Asia.

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7. _____ This sport has its roots in Asia some 2000 years ago. The modern version was first played by the English in India in the 1800s. A popular family sport, the game has gained international competitive status, where both women and men compete for titles.

8. _____ This family sport dates back to our stone age ancestors, to the Egyptians, the Polynesians, and the Italian, English, Dutch, and Basque peoples. The version played in the United States was introduced by the Dutch in 1623, and was played outside on a green. The indoor game, with the addition of pins, is believed to have begun in New York in the Early 1820s.

9. _____ This game originated in Kingston, Ontario, Canada, in 1855 by the Royal Canadian Rifles. The game came to the United States in the 1890s. The game is traced back to a game called "shinny" in which children used broomsticks and stones.

10. ____ This sport is derived from the myths and legends of the Polynesian Islanders. It was first mentioned in the West by the English traveler Captain John Cook in 1778. The sport was introduced to the United States in the early 1900s and is found mainly in California and other Pacific areas.

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Activity 2.4 **The Sanchia Project**

Introduction

The relationship between human beings and their environment changes with the introduction of any new technology. New technology alters the way people live their lives; it may improve life; it may bring new problems. However, regardless of its effect, modern technology forces cultural change. In the rapidly expanding technological world of today, the foundations of many cultures are in jeopardy. In this activity, students explore the promises and problems of the introduction of a new form of technology on a traditional culture.

Objectives

Upon completion of the activity students will be able to:

- Describe how technology changes and transforms culture.
- Evaluate the positive and negative effects that technology can have on a culture.
- Trace how technology has helped to form and shape modern culture in the United States.

Grade Level

9-12

Time

Two to three class periods

Materials

Handout 2.4.1, "The Sanchia Project"
Handout 2.4.2, "The Problem"

Procedure

1. Introduce the activity by asking students to identify ten examples of modern technology. List the ten examples on the chalkboard. Choose two or three of the examples. One at a time, erase them from the chalkboard and ask students how their lives would change if the technology were to somehow disappear or had never been developed. Ask students how life in their country would differ without the technology.

2. Explain to students that technological advances change the way people live. Tell students that technology serves to spread new forms of culture and to transform or sometimes eliminate old ones. Ask students how the technologies that are listed on the chalkboard transformed or eliminated previous forms of culture in their country. Ask them if they think the technology made life better, created significant problems, or both.

3. Tell students that in this activity they will be examining a hypothetical case in which a group of indigenous people are confronted with making a decision whether to accept or resist a new technology in their lives. Explain that generally, traditional cultures are more affected by the introduction of a new technology than are more technologically-advanced cultures. Ask students to explain the reasons for this phenomenon.

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4. Provide each student with a copy of Handout 2.4.1, "The Sanchia Project." Instruct students to read the case study on the handout. After students have read the information, answer any questions they might have.
5. Next, provide each student with a copy of Handout 2.4.2, "The Problem." Ask students to read the problem.

6. Divide students into six small groups. Each group will represent one of the issues or concerns of the Chepuma people stated on Handout 2.4.2 For example, one group will represent those who believe that the sacred and holy nature of the valley must be preserved at all costs, while another group will represent those who feel that the Chepuma burial site must not be disturbed, and so on. Instruct students to meet in small groups to form arguments on behalf of their issue or concern. Remind them that they will be making a presentation to the Council of Elders who, after hearing from each group, will decide upon a course of action. Tell students that they will need to be prepared to answer questions from the Council of Elders as well as from the other groups. Also suggest that as they plan, they think of questions for the other groups.

7. After students have planned their presentations, select one person from each group to serve as a member of the Council of Elders. Seat the six Elders in the front of the room. Remind them that they will be hearing six presentations, each expressing a particular concern regarding the building of the dam. Tell them that they should feel free to ask questions and that at the conclusion of the presentations, they will have the responsibility to decide upon a course of action.

8. Provide time for each group to make their presentations. Allow for questions and discussion from the Council of Elders and the other groups. After all presentations have been made, give the Council of Elders a few minutes to make a decision on a course of action for the Chepuma people. Ask the Council of Elders to publicly announce their decision and the reasons for the decision.

9. Conclude the activity by discussing the following:

- Electricity would only be the first step in transforming the Chepuma culture. What other changes do you think would occur after electricity is introduced?

- What are the arguments for and against the introduction of modern technology to traditional cultures?

- Give historical examples of how "technology serves to spread new forms of culture and to transform or sometimes eliminate old ones."

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THE SANCHIA PROJECT

(Hypothetical)

The Chepuma people are a group of native people who live in a valley high in the Andes mountains of Chile. The Chepuma people have generally been left alone by Chilean governments throughout history. At least part of the explanation for their autonomy lies in the remoteness of the land which they occupy.

The population of the Chepuma nation is about 1,500 persons. Economically, their lifestyle is based on the cultivation of potatoes, beans, and maize. They also raise llamas. The Chepuma people trade and sell surplus products to people living in villages and small cities on the west coast of Chile. Their nation is governed by a leader who is elected from among the elders of Chepuma families. The Chilean government recognizes the Chepuma people as Chilean citizens, equal under Chilean law and thus subject to it. However, until recently, the government has not asked the Chepuma people for any direct expression of national loyalty, nor has it attempted to enforce Chilean taxation, education, or military service laws on the Chepuma people.

The Chepuma people recognize their valley as a sacred and holy place. For generations, the elders have sung about the valley in their prayers. The water that runs through the valley is considered to be very holy. The Chepuma burial site is located at the upper end of the valley.

In 1989, the Sanchia Company, a hydroelectric power company based in Chile, approached the Chilean government with a proposal to build a dam and hydroelectric power plant at the upper end of the valley occupied by the Chepuma people. Sanchia company representatives made a strong case for the need for cheaper electric power for citizens and industries located in west-central Chile. In addition, the company showed the government how the dam and power plant could generate government income through user fees placed on both water and electricity flowing from the project.

In 1990, the Chilean government claimed ownership of the valley occupied by the Chepuma people. In short, the government told the Chepumas that the government had always owned the land in the valley, and that they had allowed the Chepumas to live there out of the kindness of their hearts. The Chepuma people were told that for the good of all Chilean people, the dam was to be built and that they must vacate the upper end of the valley. The government told the people that if they cooperated, they would continue to enjoy the benefits of Chilean citizenship and would continue to be left alone. More importantly, according to government officials, the Chepuma people were told that they would benefit from electricity generated at the plant and that the government would assist them in setting up and operating electricity-based industries in the valley.

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THE PROBLEM

The Chepuma elders are meeting to decide what they should do about the Chilean government's demands. Some of the elders believe that the Chepuma people should resist the government at all costs. Some believe that only through negotiation and compromise can they hope to resolve the problem. Others believe that the government's offer should be accepted. The following issues have been singled out for discussion:

1. The sacred and holy nature of the valley. Some believe that because of religious traditions, the valley must not be disturbed for any reason.

2. The Chepuma burial site is located in the area where the dam is planned. Some believe that under no circumstance must the burial site be disturbed.

3. Fear of the Chilean government. Some believe that if they resist government demands the Chilean government would force the Chepuma people to comply with their demands and violence would occur.

4. The need to provide for the good of all Chilean peoples. Some of the Chepuma people believe that it is the responsibility of the Chepuma to comply with the government so that other Chilean people will benefit.

5. Fear that if they comply and receive electricity, life as they have known it will change forever. Many of the Chepuma people don't want a change in their lives. They believe that electricity will eventually lead to the destruction of traditional ways and beliefs.

6. The belief that change is good and that electricity is a way for the Chepuma people to advance into the modern world.

Directions: You are Chepuma people who have strong feelings about one of the issues outlined above. In small groups, you have come before the Chepuma Council of Elders to make your feelings known. The Chepuma Elders will allow each group time to make their case. After each group has made a presentation and answered questions, the Council will make a decision about how to proceed.

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SECTION 3

ECONOMIC PERSPECTIVES

Activity 3.1 **Geography and Economic Planning**

In this activity, students understand the relationship between geographical location and economic activity. Working together in small groups, students plan the global locations of various types of economic activities.

Activity 3.2 **Community Planning**

In small groups, students decide where to locate various types of economic activities in and around a city, and then plot the activities on a community map.

Activity 3.3 **Tin Can Economics**

In this activity, students examine comparative advantage, foreign trade, and trade as an instrument of foreign policy. Students work in small groups to analyze a trade relationship between two hypothetical countries, and role play advisors to the government of one of the countries when problems develop between the two countries.

Activity 3.4 **Vizbee and Solemnville: Examining Relationships Between Industry and Community**

In this activity, students explore economic costs and benefits by analyzing a problem involving the proposed relocation of a manufacturing enterprise to a small community in economic decline. Students weigh the pros and cons from the perspectives of members of the community.

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Activity 3.1 Geography And Economic Planning

Introduction

People all over the world are involved in activities which allow them to make a living. These economic activities are influenced by geographic location. In this activity, students are provided an opportunity to understand the relationships between geographical locations and economic planning and decision making.

Objectives

Upon completion of the activity, students will be able to:

- Understand the four broad categories of primary, secondary, tertiary, and quaternary economic activities.
- Understand how locational factors influence specific economic activities.
- Make planning decisions based on knowledge of the relationships between geographic location and economic activity.

Grade Level

7-12

Time

One to two class periods

Materials

Handout 3.1.1, "Economic Activity Planning"
Handout 1.5.2, "World Map," page 22
World climate and vegetation maps if possible

Procedure

1. Introduce the activity by asking students to discuss ways that people in their community make a living. List the variety of jobs, industries, agricultural occupations, etc. on the chalkboard. Once a list has been developed, ask students to identify the unique geographical features of the area that make it a good area for the various industries, agricultural occupations, or jobs listed, i.e., water, climate, soil, transportation networks, energy supplies, markets, natural resources, etc.

2. Introduce students to the following:

- Primary Economic Activities: Those activities associated with extracting natural resources from the earth, including basic forms of production including mining, lumbering, fishing, farming, and raising livestock. The location of primary economic activities depend on resources (land, water, timber, mountains, etc.) climate, soil type, cultural factors, transportation facilities, and markets.

- Secondary Economic Activities: Those activities in which raw materials are turned into finished products such as the manufacture of industrial goods. The location of secondary economic activities depend on natural resources, energy sources for power, transportation networks, and a labor force.

- Tertiary Economic Activities: Those activities that are provided as a service rather than as a tangible product. Medical care is an example of a tertiary economic activity. The location of a tertiary

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economic activity depends on markets for the service, well-developed transportation and communication networks, and environmental factors.

- Quaternary Economic Activities: Those activities which involve the generation, processing, and dissemination of information such as a university. The location of a quaternary economic activity depends on a trained work force, proximity to educational institutions, and proximity to other highly developed quaternary economic activities.

3. Ask students to provide an example of each type of economic activity in their community (if possible). Ask students to decide if there is a relationship between the economic activities in the community and geographic features of the community.

4. Divide students into small groups of four to five students each. Provide each student with a copy of Handout 3.1.1, "Economic Activity Planning," and Handout 1.5.2, "World Map."

5. Ask students to read each of the situations presented on the handout and answer the questions posed at the end of each of the situations. Encourage students to use the world maps as they answer the questions.

6. After groups have answered all the questions, read each situation and ask one person from each group to share their answer to the question. Ask one person in each group to identify the answer to the question on the map. Continue this process for all four situations presented on Handout 3.1.1.

7. Discuss the pros and cons of the various answers provided by the groups.

8. Conclude the activity by asking students to develop a paragraph in which they respond to the question: What is the relationship between economic activity and geographical location?

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ECONOMIC ACTIVITY PLANNING

1. Primary Economic Activity Planning

You are an economic planning team interested in rice production for export. You are seeking a suitable location for your rice farms. Among the considerations you must make is finding an area where natural factors, such as water, soil, and climate are appropriate for rice production. Rice grows best in areas with hot climates and plentiful rainfall. In addition, you must locate in an area that has transportation facilities, and access to markets. Finally, you must locate in an area in which rice production is consistent with the culture of the people.

Where in the world would you locate your rice farm? List the reasons for your choice.

2. Secondary Economic Activity Planning

You are an economic planning team interested in establishing a timber milling plant which mills logs into lumber. You are seeking a suitable location for your plant. To be successful you must locate an area that possesses the following:

An abundant supply of timber
A supply of energy for power
Transportation
Laborers to work in the mill
A government that would support your effort

Where in the world would you locate your timber milling plant? List the reasons for your choice.

3. Tertiary Economic Activity Planning

You are an economic planning team interested in setting up an outdoor theme park similar to Disneyland or Disneyworld. You do not want to locate the park in the United States. To be successful you need a location that possesses the following:

A large population
Well-developed transportation and communication networks
An appropriate climate and environment
A labor force

Where in the world would you locate your theme park? List the reasons for your choice.

4. Quaternary Economic Activity Planning

You are an economic planning team interested in establishing a high tech research center for the study of heart disease. You are seeking a suitable location for your center. Among your considerations are:

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An area that possesses a highly skilled workforce
Educational institutions
Other high tech industries and institutions

Where in the world would you locate your research center? List the reasons for your choice.

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Activity 3.2 Community Planning

Introduction

The location of an economic activity is influenced by a variety of factors, including the physical characteristics of sites, availability of resources, transportation networks, population, government policies, economic trends and markets, and quality of life considerations, such as good schools, availability of recreation, and cultural opportunities. In this activity, students are provided an opportunity to make decisions about where to locate certain types of economic activities in and around a city.

Objectives

Upon completion of the activity, students will be able to:

- Identify the four primary forms of economic activity.
- Understand the variables that influence the choice of where to
- locate an economic activity.
- Understand the relationship between a type of economic activity and the variables that influence where to locate the activity.

Grade Level

7-12

Time

One class period

Materials

Handout 3.2.1, "Map of Millersville"

Procedure

1. Begin the activity by asking students to identify ten to fifteen ways that people in their community make a living. List these examples of economic activity on the chalkboard.

2. Ask students to categorize the list of economic activities on the chalkboard into types of economic activity, i.e., Primary Activities, Secondary Activities, Tertiary Activities, and Quaternary Activities. Review the following as needed:

Primary Activities: Economic activities which include basic forms of production such as farming, fishing, mining, etc. Normally associated with the extraction of natural resources from the earth.

Secondary Activities: Economic activities which include turning raw materials into finished goods, such as manufacturing, food processing, and producing power. Normally associated with taking a primary material and turning it into something more useful.

Tertiary Activities: Economic activities which are based on providing a service such as banking, communication, transportation, building and repair, entertainment, wholesale and retail trade. Normally associated with providing a people-to-people service.

Quaternary Activity: Economic activities that include the generation, collection, processing, and dissemination of information such as research and development centers, data collections centers, and universities.

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3. Ask students to discuss where in their community these different types of economic activities are located and why they are found in certain locations.

4. Divide students into small groups of four to five students each. Provide each with a copy of Handout 3.2.1, "Map of Millersville." Write the following examples of economic activities on the chalkboard and instruct students to plot the best location for the activities on the map of Millersville. (Feel free to add types of economic activities that might better fit your needs.)

Soft drink manufacturing plant
High tech farm or ranch
Convenience store
Motel/restaurant complex
Computer distribution warehouse
Shopping center
Research center
Office park
Law firm
Library
Trucking company

5. Ask students to share and discuss their site decisions and to provide reasons for choosing various sites on the map. Discuss where similar types of economic activities are located in their city or town and the similarities and/or differences that exist between them and the choices made on the Millersville map.

6. Conclude the activity by discussing the relationship between economic activity, the location of an activity, and the kinds of geographic characteristics needed for certain types of economic activities.

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MAP OF MILLERSVILLE

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Activity 3.3 **Tin Can Economics**

Introduction

Not all countries possess the resources, skills, or production capacity to meet all their demands for goods and services. In order to meet the demand, nations trade with one another. However, despite its benefits, international trade can also create problems. Nations that control essential resources can use the resources to pressure or dominate consumer countries. By withholding resources, goods, or services, the exporting country can control price as well as availability of commodities and thus the potential actions of the consumer countries. In this activity students explore how international trade can be used as an instrument of foreign policy.

Objectives

Upon completion of the activity, students will be able to:

- Explain the concept of comparative advantage.
- Describe why international trade is important in the world today.
- Explain how and why international trade is sometimes used as an instrument of foreign policy.

Grade Level

7-12

Time

One class period

Materials

Handout 3.3.1, "Tin Can Economics"

Procedure

1. Introduce the activity by explaining the concept of comparative advantage to the students, i.e., because nations differ in the nature of their resources, some nations are able to produce certain goods and services more cheaply than others. These nations are said to have a comparative advantage in the production of these goods and services. Ask students to provide examples of the comparative advantage concept in the world today. (Japan-human resources, Saudi Arabia-petroleum resources, Cuba-sugar cane)

2. Ask students why international trade is so important in the world today. (It allows each nation to concentrate on the economic activities that it can do best.) Ask students to give examples of goods that are imported by the United States and goods that are exported by the United States. Discuss why the country chooses to import and export these goods.

3. Divide students into small groups of four to five students each. Provide each student with a copy of Handout 3.3.1, "Tin Can Economics." Instruct the students to read the problem and as a group to develop a proposal for solving the problem.

4. Ask one student in each group to read their group's solution to the problem. Conclude the activity by discussing the following questions:

- If the OPEC oil cartel were to cut off oil supplies to your country, how would that affect the country? Were that to happen, how do you think the government would respond?

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- What danger is involved in becoming dependent on one country for the source of a good or service?
- How did the invasion of Kuwait by Iraq affect oil supplies to your country?
- What resources, goods, or services does the United States possess that might be used as an instrument of foreign policy in various countries in the world today?
- Can you provide specific examples of countries that have used resources, goods, or services to influence foreign policy?

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TIN CAN ECONOMICS

The tiny African country of Mariposa is located on the northwestern coast of Africa. The population of the country numbers about 500,000. The country is extremely poor and lacks most resources. In order to feed the people, one-half of the food must be imported from the United States, Canada, and the European community. Many people in Mariposa grow beans which are particularly suited to the climate and soil of the country. The beans are grown, harvested, and canned in Mariposa for export sale to countries throughout the world. Much of the Mariposan income comes from the sale of canned beans on the world market.

Besides importing food, Mariposa also imports tin from the neighboring country of Baza-So. The imported tin is manufactured into tin cans and used for packaging the beans. Mariposa imports tin from Baza-So, a small mineral resource rich country, because Baza-So is nearby, the transportation routes are in place, and the price of tin is much cheaper than in other countries.

Recently a new government has come to power in Baza-So. This government has made claims that a fifty mile strip of land in Mariposa which borders Baza-So rightfully belongs to the nation of Baza-So. The Baza-So government has asked that the land be returned and have threatened to cut off the supply of tin to Mariposa if it does not comply. This strip of land is the richest land in Mariposa and produces large quantities of beans each year.

Directions: You are members of the ruling body in Mariposa. What are the many problems that the Baza-So demands create, and how do you propose that Mariposa respond?

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Activity 3.4

Vizbee And Solemnville: Examining Relationships Between Industry And Communities

Introduction

All industrial manufacturers have common needs and costs. They need energy resources, money for land and capital equipment, workers, transportation and communication networks, and a strong market. A successful manufacturing enterprise produces profit, grows, provides for its workers, and makes positive contributions to the community in which it is located.

Because industries are located in communities, they too expect to pay costs and achieve benefits. A successful industry/community relationship would be one in which both have low costs and receive high benefits. Often however, this "balance" between costs and benefits is not achieved and problems result. In this activity students examine a hypothetical costs and benefits problem involving the proposed relocation of a manufacturing enterprise to a small community.

Objectives

Upon completion of the activity, students will be able to:

- Understand the relationship between business and industry and the places they are located.
- Describe costs and benefits as they pertain to the relationship between business and industry and the places they are located.
- Analyze business and industry, and community, costs and benefits from a variety of perspectives.

Grade Level

9-12

Time

Two to three class periods

Material

Handout 3.4.1, "The Vizbee Company"
Handout 3.4.2, "Solemnville"
Poster paper
Markers
Masking tape

Procedure

1. Begin the activity by presenting students with the following problem: You are the developer of a new form of tennis shoe. Your shoe has been produced in small quantities and has been very well received by the public. You now want to manufacture the shoe in large quantities and need to build a manufacturing plant. What costs do you anticipate? What benefits do you think you will receive? Ask students to suggest a list of costs and benefits. List the suggestions on the chalkboard under the categories **COSTS and BENEFITS.**

Note To Teacher

COSTS might include resources, capital equipment, a building site, a building, workers, energy, transportation network, communications network, and so on. **BENEFITS** might include greater profits, a quality product and reputation, opportunity for growth, and so on.

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2. Tell students that the relationship between any form of business and the community where a business is located involves costs and benefits for not only the business but also for the place it is located. Ask students to list potential costs to and benefits for the place in which the tennis shoe manufacturer would locate. List the suggestions on the chalkboard under the categories **COSTS and BENEFITS.**

Note to Teacher

COSTS might include crowding, pollution, strain on basic services, strain on recreational and cultural opportunities, and so on. **BENEFITS** might include jobs, economic growth, increased tax base, and so on.

3. Ask students to identify several examples of business, including manufacturing if it exists in the community. Ask students to suggest what costs exist for some the businesses and what costs exist for the community because of those businesses. Next, ask students to suggest benefits that these businesses enjoy and the benefits that the community receives because of these businesses. Ask students if they think business and industry or the community is getting the better deal. If students suggest that business and industry is getting the better deal, ask them how business and industry might "give" to the community to increase community benefits.

4. Tell students that the ideal situation is when costs are low and benefits are high for both an industry and community. Also explain, that this form of "balance" is difficult to achieve. Ask students why it might be difficult to achieve this form of "balance."

5. Provide a copy of Handout 3.4.1, "The Vizbee Company" to each student. Instruct students to read the information on the handout. After students have completed the reading discuss the following questions:

- What costs would a community have to pay to bring the Vizbee Company to the community?
- What benefits might a community receive from bringing the Vizbee Company to the community?
- In the case of the Vizbee Company do you think that the benefits to a community are greater than the costs?

6. Next, provide a copy of Handout 3.4.2, "Solemnville," to each student. Instruct students to read the information on the handout. After students have completed the reading divide them into small groups of four to five students each. Provide each group with two sheets of posting paper and a marker. Instruct them to identify reasons for and reasons against bringing the Vizbee company to Solemnville. Ask them to post the "reasons for" (benefits) on one sheet of paper and "reasons against" (costs) on the other. After students have finished their lists, post the sheets and ask students to discuss their thoughts. Conclude the discussion by asking for a show of hands of how many would seek to bring the Vizbee Company to Solemnville.

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7. Conclude the activity with a discussion of the following:

- In what ways does industrialization have both positive and negative effects on people's lives?
- In today's economy, why are companies such as Vizbee in a position to dictate the terms of locating or relocating to a town or city?
- In what ways are businesses and industry affected by "place?"
- In what ways is "place" affected by business and industry?

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THE VIZBEE COMPANY

The Vizbee Company manufactures plastic/fiberglass luggage. The company was founded in 1964 and has grown steadily for the past thirty years. Vizbee luggage is generally sold in large discount stores throughout the United States. The company is currently located just outside of Chicago, Illinois. The company employs about 300 persons.

Six months ago, the Vizbee Company sold its land and buildings to a small air cargo business operating out of O'Hare Airport in Chicago, Illinois. Since the sale, the Vizbee Company has been looking for a site on which to relocate and modernize its plant and operations. The Vizbee Board of Directors has narrowed its choice to three sites: Tucson, Arizona; Pueblo, Colorado; and Solemnville, Vermont. The company must leave the current site located in Illinois in six months. Discussions between Vizbee management and citizens in each of the three communities will soon take place. Community leaders at all three sites have stated that they welcome the discussions.

The Vizbee Company has examined all three sites. Each site possesses the ingredients essentials to build and conduct their business. Energy sources, land, workers, transportation networks, and communication networks are in place at each of the three sites.

The Vizbee Company is seeking to maximize benefits and reduce costs. Because each of the sites possesses similar ingredients essential to conducting business, Vizbee is looking for other benefit offers from each of the potential sites. For example, Vizbee has suggested that they be granted a special dispensation from paying any local and state taxes for a period of seven years. In addition the company wants to relocate half of its work force to the new site. They will reportedly seek special, local, low-cost, home loans for their employees.

In the past, the Environmental Protection Agency has investigated Vizbee for water and air pollution violations. In addition, the company is reported to have a reputation for denying access to women and minorities for management positions. Because this information is a matter of public record, the company has warned that if it is pushed to defend itself on either or both of these issues by people at any of the sites, it will drop that site from consideration. Finally, Vizbee has stated that, should they not be able to develop a "working relationship" with any of the sites, they plan to move the entire operation to Taiwan.

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SOLEMNVILLE

Solemnville Vermont is a small community of 7,500 persons. The city is located in south-central Vermont. The economy of Solemnville is based on tourism, a few examples of light industry, a small private college, and two small boarding schools. Until recently, the population of Solemnville has been steady. However, in the past four years, the town has lost population due to the weak and unstable economy. Two major employers, a mobile home builder and a small electronics firm have gone out of business. Solemnville has had no success attracting new business and industry to the area.

The citizens of Solemnville are proud of their city. The college is the focal point for cultural activities in the community. Recreation includes numerous outdoor sports including hiking, fishing, biking and, in the winter, skiing. The people of Solemnville are very conscious of the environment. Many people living in Solemnville are college educated, and nearly everyone has graduated from high school. Many of the citizens moved to Solemnville because of the promise of a simpler, less material form of life. For example, eight months of the year, the majority of citizens commute to and from their jobs on bicycles. Attendance at the history discussion groups held at the local library usually draw more people than do first-run films at the only theater in town.

While the citizens of Solemnville are very protective of their community and lifestyle, they fear that continued economic decline will jeopardize everything that they hold dear. Knowing this has resulted in much heated discussion about whether or not to provide special benefits to the Vizbee Company to attract them to Solemnville. One argument heard is that the costs of bringing Vizbee to Solemnville are too high and the benefits too little. Another argument expresses the belief that if they do not bring Vizbee to Solemnville, the citizens of Solemnville will be forced to move someplace else. Another group argues that the relationship between industry and the community always involves costs and benefits. Solemnville, they say, has not, until now, joined with the real world. Everyone knows that if they do not make an attractive offer to Vizbee, the company will relocate someplace else.

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SECTION 4

ENVIRONMENTAL PERSPECTIVES

Activity 4.1 **The Problem at Cunningham's Corner**

Students understand the structure and basic function of an ecosystem and how a breakdown in any part of the system will create problems throughout the entire system. Students work in small groups to decide how best to solve a local ecosystem problem.

Activity 4.2 **Technology and the Environment**

In this activity, students understand the evolution of technology. Students examine the effects of technology on life and the environment during each of the four major technological revolutions.

Activity 4.3 **Yaluha's Dilemma**

In this role play activity, students understand the concept of carrying capacity. Students examine the relationship between food needs, land, and production, and understand problems resulting from large increase of population.

Activity 4.4 **Visions of a Greater Community**

Students examine the problems related to urban sprawl and urban blight. Students assess these problems in and around their community and propose solutions to community problems by developing "Visions of a Greater Community."

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Activity 4.1 The Problem At Cunningham's Corner

Introduction

All life on the planet Earth exists in a layer of air, water, and soil having an approximate thickness of nine miles. This thin film which surrounds the planet is called the ecosphere. Ecosystems are artificially defined geographical areas within the ecosphere. Ecosystems consist of interdependent nonliving and living components and substances which, together with sunlight, form a self-perpetuating environment. In this activity students are provided an opportunity to understand the mechanics of ecosystems and the problems that are created when any part of the energy flow in an ecosystem is interrupted.

Objectives

Upon completion of the activity, students will be able to:

- Understand the basic elements and interactions of an ecosystem.
- Identify different types of ecosystems.
- Understand that ecosystems are jeopardized when the energy flow or interactions between the component's of the ecosystem is interrupted.
- Understand the many ways that ecosystems serve human beings.
- Understand the ways that human beings are contributing to the destruction of ecosystems.

Grade Level

10-12

Time

One to two class periods

Materials

Handout 4.1.1, "Ecosystems"
Handout 4.1.2, "The Problem at Cunningham's Corner"
Poster paper
Markers
Masking tape

Procedures

1. Distribute a copy of Handout 4.1.1 to each student. Review the list of terms and examples.

2. Review the example of the ecosystem found on the handout and ask students to list examples of ecosystems. (Ecosystems are defined for convenience, e.g., a forest, a desert, a pond, Lake Erie, a jar of pond water, a garden. All that is necessary is some kind of boundaries which define the area studied.)

3. Divide the class into small groups of four or five students each. Provide each student with a copy of Handout 4.1.2, "The Problem at Cunningham's Corner." Ask students to read the problem and to follow the directions provided with the handout. Be sure that each group has poster paper and a marker.

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4. When the groups have completed their planning as instructed on Handout 4.1.2, ask each to make their presentation. When all group presentations have been completed, poll the group about whether the farmers' and ranchers' actions should be taken or halted.

5. To conclude the activity, discuss the following questions:

- Human ecology is the study of the relationship between human beings, other organisms, and their environment. What is the relationship between human beings and ecosystems? What do human beings receive from the many ecosystems found on planet earth?

- It is said that human beings are totally dependent on ecosystems and the ecosystem process for their survival, as well as for material comforts and leisure. It is also suggested that the actions and activities of human beings are destroying precious ecosystems. Agree or disagree with this statement and provide examples to support your choice.

- Why is there so much emphasis today on living ecologically, or living in harmony with nature? What responsibilities do each of us have to the ecosphere?

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ECOSYSTEMS

Terms to Know

Ecosphere: The thin layer of soil, air, and water which surrounds the earth; having an approximate thickness of nine miles, is the home of all living things on the planet

Atmosphere: The air portion of the ecosphere

Hydrosphere: The water portion of the ecosphere

Lithosphere: The land portion of the ecosphere

Ecosystem: An artificially defined area of nature that consists of living organisms and nonliving substances interacting together in a mutually supportive system

Aquatic Ecosystems: Lakes, ponds, seas, oceans, rivers

Biomes: Forests, grasslands, deserts, tundra

Biotic: Living components of an ecosystem

Abiotic: Nonliving compounds of an ecosystem

Components of an Ecosystem

Producers: Green plants and bacteria (grasses, trees, sagebrush, clover, corn)

Primary Macroconsumers or Herbivores: Plant eaters (deer, cows, birds, sheep, fish)

Secondary Macroconsumers or Carnivores: Meat eaters (lion, shark, fox, hawk, weasel)

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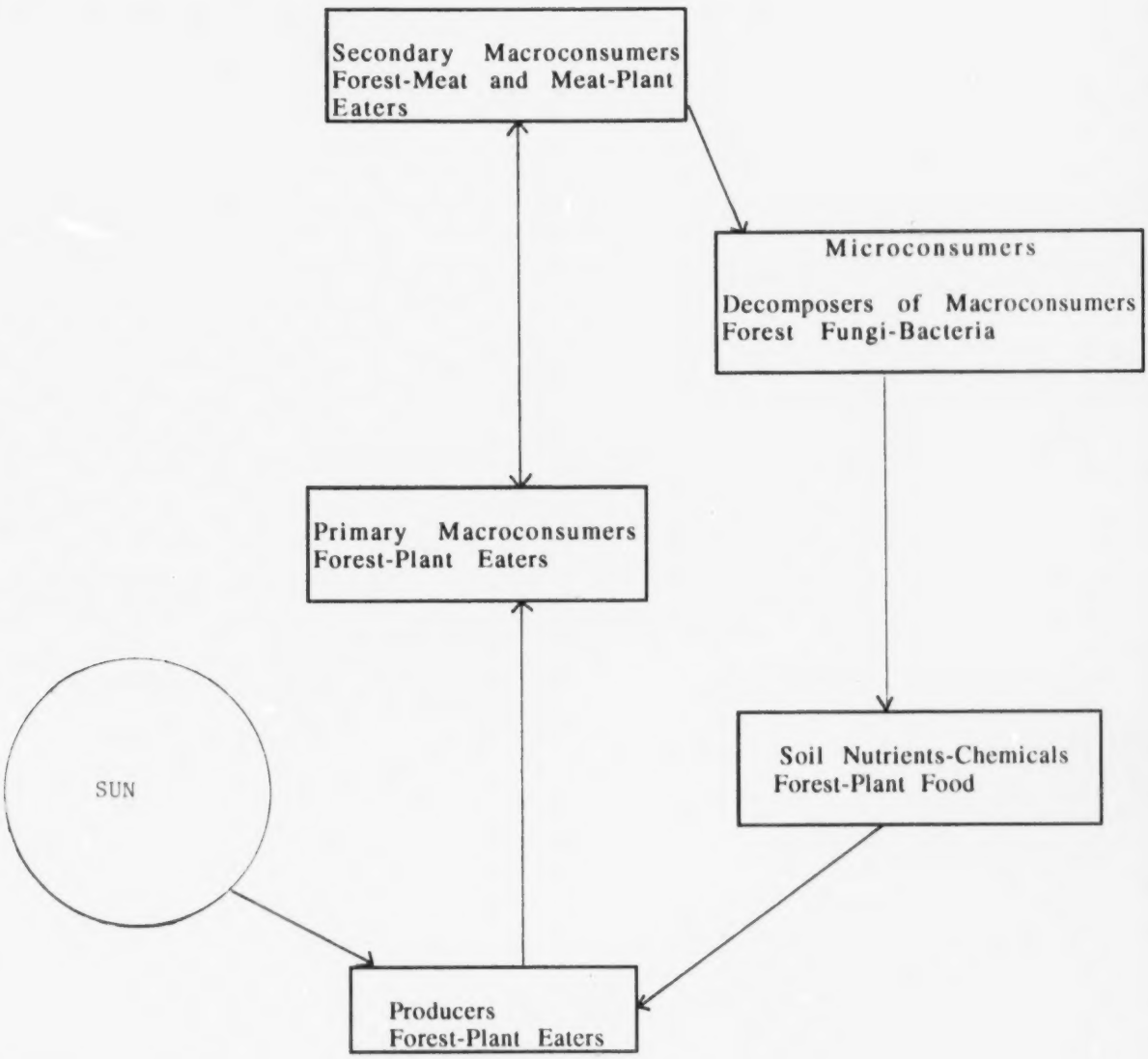
Simplified Ecosystem - With Energy Flow

Geographic Region - Forest



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THE PROBLEM AT CUNNINGHAM'S CORNER
(fictional)

Cunningham's Corner is the name of a 240 acre plot of ground located in the northwestern part of the state of Nebraska. Cunningham's Corner is forested by a variety of trees, is rich in grasses and green plants, and possesses a variety of animal life including deer, fox, coyotes, raccoons, rabbits, and weasels. A stream runs through Cunningham's Corner. The stream is the home of fish, turtles, frogs, and crayfish. Pheasant, quail, and numerous birds inhabit the area.

Recently, in the area surrounding Cunningham's Corner, there has been an outbreak of small animal and fowl killings on the ranches. The farmers and ranchers in the area believe that coyotes living in Cunningham's Corner are responsible. They have met and are talking about setting poison-bait traps throughout Cunningham's Corner in order to kill off the coyote population.

Your group has been called in to project and report on the environmental consequence that this action may have on Cunningham's Corner. Your task is to decide what possible effects, if any, the removal of the coyotes might have on the Cunningham Corner ecosystem and to make recommendations about whether the coyotes should be killed or saved.

Directions: Keeping in mind the ecosystem model outlined in Handout 4.1.1, discuss what consequences, if any, the removal of the coyotes from Cunningham's Corner would have on the area. Prepare an argument for or against the removal of the coyotes. Use the poster paper to outline or illustrate the major points of your argument, and prepare a presentation of your argument. You will be asked to make a presentation to the other groups.

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Activity 4.2 Technology And The Environment

Introduction

Four major technological revolutions have taken place in the history of the world. Each of the revolutions created a change in the way human beings modify and use the physical environment to serve their needs and wants. In the activity, students are provided an opportunity to better understand the evolution of technology and the ways that technology has been used by humankind to alter the environment.

Objectives

Upon completion of the activity, students will be able to:

- Describe the four major technological revolutions that have occurred in the world.
- Identify technologies from each technological revolution and understand how technology has been used by human beings to alter their environments.
- Evaluate the impact technology has had on environments.
- Identify ways human beings can use technology to meet needs and preserve and protect the environment.

Grade Level

9-12

Time

Two class periods

Materials

Handout 4.2.1, "Technological Revolutions"
Overhead projector (optional)

Procedures

1. Introduce the activity by telling students that there have been four major technological revolutions in the history of the world (tool making, agricultural, industrial, information). List each on the chalkboard.

2. Provide a minilecture on humankind's need to use the environment to fulfill their needs and wants, and the relationship between human activity and the environment. A good example to use is that of primitive hunters and gatherers who generally met their needs and lived in harmony with nature and the environment.

3. Divide students into four groups. Provide each student with a copy of Handout 4.2.1, "Technological Revolutions."

4. Assign each of the groups one of the four technological revolutions listed on the handout. Ask each group to list additional examples of technological innovations characteristic of their assigned revolution and to complete the remainder of the chart on the handout for their particular revolution.

5. After students have completed the charts on the handout, ask each group, beginning with the "tool making" group to discuss their responses to question 2, 3, and 4 on the handout. Record the responses on the chalkboard or on an overhead projector.

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6. Conclude the activity by discussing the following:

- Why do human beings create technology?
- Provide examples from history of what technology has done for human kind and what technology has done to human kind.
- What is the relationship between technology development and the environment. Provide examples.
- Is it possible that human beings can develop technology and preserve and protect the environment? Why or why not.

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TECHNOLOGICAL REVOLUTIONS

	TOOL MAKING	AGRICULTURAL	INDUSTRIAL	INFORMATION
1. Time of Revolution	_____	_____	_____	_____
2. Examples of Technological Innovations	Ax Hammer Spear Wheel Bow & Arrow _____ _____	Irrigation Seed Planting Grain Storage _____ _____ _____ _____	Steam Engine Assembly Line Automobile Railroad _____ _____ _____	Computer Satellite Communication Jet Airplane Television Copy Machines _____ _____
3. Changes Created in Lives Because of Technology	Advantages Disadvantages	Advantages Disadvantages	Advantages Disadvantages	Advantages Disadvantages
4. Impact of Technology on Environment	Pro Con	Pro Con	Pro Con	Pro Con

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Activity 4.3 Yaluha's Dilemma

Introduction

The relationship between population and an agricultural economy is an important one. In many developing countries today, traditional farming methods are often labor intensive, requiring many people to work in the fields and to tend the animals. Often, as population grows in these economies, a point is reached in which the ability of the land to grow enough food for the population is surpassed. In this instance, needing the food or risking starvation, the land is over-taxed and the carrying capacity of the land is jeopardized. In this activity, students are provided an opportunity to understand the causes and consequences of over-producing and destroying the ability of a plot of land to produce food and other resources.

Objectives

Upon completion of the activity, students will be able to:

- Understand the geographical concept of carrying capacity.
- Understand the relationship between population growth and the production capacity of the land.
- Understand the difficult decisions between short-term survival and long-term protection of the land and environment.

Grade Level

7-12

Time

Two class periods

Materials

Handout 4.3.1, "Yaluha's Dilemma"

Procedure

1. Define the term carrying capacity as the ability of land to produce food and other resources to support a population. Give students the following example of carrying capacity. A population (x) depends upon a plot of land (y) to provide them with the food that they need to survive. Given proper care and attention (Z) the land will provide food and support the current population. If the population grows (2x), the same plot of land (y) must support the population. In order to increase production and grow food, the population increases it's demands on the plot of land and over uses it (-y). This results in the destruction of the production capacity of the land and an inability of the land to support any population (-x).

2. Ask students if they can provide real examples of carrying capacity problems related to population growth.

3. Divide students into small groups of four to five persons each. Provide each student with a copy of Handout 4.3.1, "Yaluha's Dilemma." Ask students to read the dilemma.

4. Ask students, in their small groups, to answer the following questions:

- What are Yaluha's possible choices?

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- Which of the choices presented to them, do you think the village counsel would choose?

- Which of the choices do you think Yaluha would most support? Why?

5. Ask the groups to report their responses to each of the three questions. List the answers to question 2 and 3 on the chalkboard?

6. Conclude the activity by discussing the following:

- In any situation, what is the relationship between the carrying capacity of the land and the population that relies upon that land for resources?

- Why is the carrying capacity issue a particularly troublesome issue in developing countries and in poorer economic regions on the planet?

- Why would a group choose to over-produce in the short run, knowing that over-production might cause long-term nonproductivity?

- What are some ways that you can suggest to resolve the problem of carrying capacity and population growth? What's difficult about identifying potential solutions?

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YALUHA'S DILEMMA

(Hypothetical situation)

In the central African nation of Chad, is a small village located on the western border of the country just south of the Sahara Desert. The population of the village is 200 persons. Unlike many Chadians who have been uprooted from their homes and villages by war and drought, the people in this village have led a simple but stable life. Part of their good fortune is explained by the fact they live in an area that is still agriculturally productive. Many people in Chad are locked in a constant struggle against starvation. International relief agencies have offered food and health care to these people, but the government of Chad has not given the agencies approval to serve the people.

The eldest member of the village is a man whose name is Yaluha. During the past several years, Yaluha has sought to maintain the productivity of the land on which his people live. Because of his knowledge of the land, the people have been able to raise and graze domestic animals and to produce food for the village without causing harm to the land.

Now, however, Yaluha has a problem. A high birthrate and a relatively stable population has created a population problem in the village. There are more people to feed and thus a need for more food to be grown and animals to be grazed on the land controlled by the villagers.

Today the village counsel is to meet with Yaluha to seek his advice on what to do to meet the demand for more food.

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Activity 4.4 Visions Of A Greater Community

Introduction

During the past fifty years, land development in the United States has often occurred without benefit of planning, controls, and intention. This rampant form of land development has led to what is commonly called urban sprawl. Two major problems are related to urban sprawl: environmental problems and social problems. In this activity students examine the phenomenon of urban sprawl, assess urban sprawl and its related problems in and around their community, and propose solutions to the problems by creating "Visions Of A Greater Community."

Objectives

Upon completion of the activity, students will be able to:

- Describe the causes of urban sprawl.
- Understand the environmental and social consequences of urban sprawl.
- Recognize the environmental and social consequences of urban sprawl in or around their community.
- Suggest ways to reverse the problems created by urban sprawl in or around their community.

Grade Level

9-12

Time

Three to four class periods.

Materials

Handout 4.4.1, "Hometown"
Handout 4.4.2, "Visions Of A Greater Community"
Maps of student's town or city (optional)
Polaroid cameras and/or video cameras (optional)
Large pieces of butcher paper or poster paper (optional)

Procedure

1. Begin the activity by asking students to define the term "Urban Sprawl." (The rapid expansion of metropolitan areas through building housing developments and shopping centers farther and farther from urban centers and lacing them together with more and more highways. Widespread development that has occurred without any overall land-use plan). Write the definition on the chalkboard. Ask students if they think urban-sprawl characterizes land development in or around their community.

2. Provide each student with a copy of Handout 4.4.1, "Hometown." Instruct students to read the information on the handout.

3. Tell students that urban sprawl generally results in two major types of problems: environmental problems and social problems. List these two categories on the chalkboard and ask students what environmental and social problems "Hometown" likely confronted because of urban sprawl.

Note to Teacher

Students need to understand that the following costs or problems are commonly associated with urban sprawl: **Environmental**

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problems 1. Loss of agricultural land. 2. Degradation and depletion of water resources. 3. Loss of recreational and scenic areas to new highway systems. 4. Massive consumption of non-renewable energy resources. 5. Pollution. **Social problems** 1. Migration resulting in economic and racial segregation. 2. Declining tax base and deterioration of public services. 3. Segmentation and desocialization caused by new highways. 4. Cycle of migration and urban decay.

4. Be sure that students understand each of the environmental and social costs of urban sprawl listed above before proceeding with the activity. You might ask them to conduct research on each of the problems or invite a city planner or urban planning specialist into the classroom to discuss each of the costs with the students.

5. Provide students with a list of the environmental and social problems or costs associated with urban sprawl. Ask students to identify examples of the costs or problems in their own community. Instruct students to list specific examples and then discuss the examples with the class.

Note to Teacher

You may wish to extend this segment of the activity. One suggestion is to develop a community map. Using a city map (available in the phone book or from your local city government) have students develop a large city map on one wall in the classroom using large sheets of butcher paper or poster paper. On the map, work with students to identify the pattern of urban sprawl as it is developing in your community. For example, identify highways, the center of the city, areas of urban blight, various housing and shopping developments and so on. Have students trace the continuing spread of the urban sprawl in their community. You may also want students to document the problems associated with urban sprawl. If you can arrange a way for students to safely tour the community, you can ask them to take pictures of the problems with a Polaroid or video camera.

6. After students have a good feel for urban sprawl and the problems related to urban sprawl in their community, provide each with a copy of Handout 4.4.2, " Visions of Greater Community." Explain to students that the proposals identified in the reading are one community's suggestions for reversing the trend of urban sprawl and urban decay and for bringing vibrancy back to the city. Instruct them to read the information on the handout.

7. After students have read the information on the handout, divide them into small groups of four to five students each. Instruct them to generate a list of ideas for making their good town or city a great town or city. Encourage creative thinking. Ask each group to make a list of their ideas.

8. After students have generated a list of ideas for making their community "great," ask students to present their group ideas. As each idea is presented, ask students how the idea would help to halt the problems associated with urban sprawl, i.e. environmental problems and social problems. If you had students develop the large

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wall map, encourage them to use it in their presentations. Ask them to assess the cost of each idea in relation to the cost of the continuing problem, whatever it might be. Ask students to discuss whether or not some problems seem to more difficult to solve than others? (For example reclaiming land back for agriculture.)

9. Conclude the activity, by instructing students to select the best five or ten ideas generated and to send them, along with an explanation of this activity, to city officials in your community. You may also want to send a copy to the local newspapers.

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HOMETOWN

The automobile played a critical role in changing Hometown. Before the automobile our city was compact, with homes, schools, businesses, and workplaces all within walking distances. Many business persons lived above their shops and stores. Hometown was separated from Next-town by farms and open country. Hometown was linked to Next -town and beyond by horse-drawn trolleys and eventually buses.

Many jobs and the lack of consumer goods during WW II made it possible for people in Hometown to accumulate lots of money. After the war ended, people wanted to spend their money on cars and houses. However, many did not want to live right in the center of Hometown. Poor housing, a decaying sewage system, irregular garbage collection, and automobile and factory pollution were common in Hometown. Possessing automobiles, many Hometown citizens sought to live outside the city and drive into the city only for work. Land developers responded to the people's demands, and the Hometown suburbs were born. Stimulated by low-interest mortgages, tax-deductions for mortgages, and lower property taxes than in Hometown itself, people moved out of the city in large numbers. Developers bought land from the farmers wherever they could and built homes. There was little planning, and very few controls.

With suburbs came highways. Highways were both a response to urban sprawl in Hometown, and helped to perpetuate it by making it easier for people to live further and further away from the Hometown center. As the suburbs grew, the need for services also increased. Shopping centers, office complexes, industrial parks, and entertainment centers were built in the suburbs to meet the needs of the suburbanites.

Hometown has changed dramatically in the past fifty years. Many people have moved out of the city. Of course some people still choose to live in the city. Those who live outside but work in the city, often drive 40 to 60 minutes each way on the superhighways that connect the Hometown center with their communities. While the city provides entertainment and shopping opportunities, most people who live outside the city rarely come to the city for those purposes. Instead, they spend their money in their own communities. The farms and open land that once surrounded Hometown have long since disappeared.

On the surface, many people say that urban sprawl in Hometown is not a problem, and life is better and more enjoyable because of where and how they live. Many point out that new homes, highway construction, and the automobile industry have all benefited and have strengthened the nation's economy as a whole. Urban sprawl has created some good for Hometown. However, it has also created some problems.

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VISIONS OF A GREATER COMMUNITY

In the mid-1980s, The Urban Design Forum, an organization of forward thinkers interested in preserving cities, chose "Ideas for a Great City" as the theme for its third Urban Design Symposium. Their idea was to ask the public for its thoughts on what could make a good city great.

The Forum solicited ideas for making Denver, Colorado, a great city. Denver, one of the nation's youngest major cities was growing at about three times the national average. At the time of the symposium, Denver's population was 1.5 million. The city possessed a number of federal offices (second only to Washington, D.C.), the U.S. Mint, nine colleges and universities, and a State Capitol Building located exactly one mile above sea level. But as Forum officials claimed, big buildings do not a great city make. Edmund Bacon, a nationally-known city planner told a symposium audience that "A city becomes great when its people begin aspiring to greatness."

Hundreds of ideas were sent to the Forum. Among some of those ideas are the following:

1. Developing a network of bike and pedestrian trails off street that dead-end in lots, where vans could be parked. The vans, equipped with bike racks could ferry people into the city.

2. Ban meter parking in the city during pollution-alert days and impose a surcharge of at least $1 on all parking lots, while bus fares are kept at 35 cents.

3. Because of the beauty of Denver's mountains, build a giant prism, suspended over a walking mall, to make Denver the City of Rainbows.

4. Tear out concrete and asphalt in Denver's "Old Town" and replace the street with the original Belgian cobblestones.

5. Plant natural grasses and other native vegetation in traffic islands.

6. Police wear running shoes and walk instead of patrol in police cruisers.

While many of these ideas were not acted upon, some of the hundreds of ideas submitted for consideration did become part of Denver's master plan. Today, Denver is fast becoming one of the most beautiful, progressive, and vibrant cities in the United States.

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SECTION 5

POLITICAL PERSPECTIVES

Activity 5.1 **Territorial Squares**

In this activity, students work in teams to solve a problem involving both geographical and political understanding and decision-making. Students understand the relationship between unlimited wants and needs, and limited resources.

Activity 5.2 **International Environmental Politics**

Students explore global environment problems and the problems related to collective political decision-making and action. Students understand the differences between short-term, self-interest decision-making, and long-term, human-interest decision-making.

Activity 5.3 **Cartoons, Geography, and World Views**

In this activity, students explore the form and function of political cartoons. Students then draw a political cartoon that expresses a political geography topic, theme, issue, or problem.

Activity 5.4 **Global Metaphors**

In this small and large group activity, students are provided an opportunity to discuss global issues which they feel need most attention in the world today. In addition, they discuss ways for addressing the issues.

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Activity 5.1 Territorial Squares

Introduction

Political geographers are concerned with the geographical consequences of political decisions and actions, the geographical factors which were considered during the making of any decisions, and the role of any geographical factors which influenced the outcome of political actions. In this always engaging activity, students work to solve a problem requiring both geographical and political understanding and decision making.

Objectives

Upon completion of the activity, students will be able to:

- Understand the interaction of geographical area and political process.
- Discuss the relationship between unlimited human desires and limited resources.
- Examine the various process by which human beings attempt to resolve issues involving territory and territorial expansion.

Grade Level

9-12

Time

Two class periods

Materials

Handout 5.1.1, "Student Planning Sheet"
One large poster size facsimile of Handout 5.1.1 approximately 45"x45"
Markers: red, blue, purple, green
50 to 60 pieces of plain paper approximately 2"x2"

Procedure

1. Begin the activity by dividing students into four teams. Assign each team a name of one of the colors found on Handout 5.1.1. For example, Red team, Blue team, and so on. Instruct each team to arrange their chairs or desks in a circle. Be sure that teams are located separately from one another in the room.

2. Provide one copy of Handout 5.1.1, "Student Planning Sheet," to each group. Also provide each group with 12 -15 pieces of the plain paper strips. Ask one student in each group to write the name of their team, i.e. Red, Blue, etc., in the upper right hand corner of each of the slips of paper. Post the large Territorial Squares chart in the front of the classroom where all students can see it.

3. Tell students that they are now going to play the Territorial Squares Game. Tell them that the object of the game is for each team to complete a string of unbroken squares on the chart from their border to the opposite border. For example, Red to Blue, Purple to Green, etc. Explain that teams will select squares on the playing surface in a series of rounds. For example, during Round One, each team will secretly select any square on the chart and write the letter and number of that square on one of the small strips of paper provided to them. As facilitator, you will gather the four selections

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and read the selections out loud to the whole group. Tell students that their team will be awarded the square of their choice as long as another team does not also select the same square. For example if Purple select square F-4 and no other team selects the square F-4, that square will be awarded to the Purple team. On the master chart located in the front of the room, you would then place a purple P in square F-4. This signifies that the square is occupied by the Purple team and is no longer available for selection. Of course if Red selects square D-8, and no other team selects that square, you would place a red R in D-8 to signify that D-8 belongs to the Red team, and so on.

4. Tell students that in the event that two or more teams select the same square during any single round, that square will not be awarded to any team and will remain available for selection during following rounds. For example, if both the Green and Blue teams select square G-7 during round five, neither team is awarded a square and G-7 remains available for selection. Tell students that a string of unbroken squares means that the square touches another either on the top, bottom, side, or corner. For example, Square A-9 and B-8 would begin to form an unbroken string. Also tell students that the chart in the front of the room is the official record of the moves, and that the chart they have in front of them is to help them plan their moves. Finally, tell them that will have ten rounds in which to complete the objective.

5. Once again remind students that the object of the game is for each team to complete a string of unbroken squares from their border to the opposite border. Tell them that they may start anywhere on the chart. Ask students to make their selections for Round One.

Note To Teacher At some point in the activity, it is necessary for teams to select the same squares and thus get "shut out" for a round. If this does not automatically occur by round five, it is suggested that you have teams make two round selections at the same time. For example, have them make selections for round five and round six at the same time. Make sure that on the slips of paper they designate which selection is for round five and which is for round six. You may continue this for another round or two in order to create a "territory" problem.

6. Continue making the round selections and posting the results on the master chart. When it appears that one or two teams have a clear advantage, tell students that before making their next selections they may choose to negotiate with another team. Explain that each team should select a negotiator. Tell them that the rules of negotiation are the following: 1. You must be invited by another team to negotiate. 2. You are under no obligation to negotiate. 3. You negotiate for your team. 4. You negotiate in private, away from the other groups. 5. Two or more teams may negotiate at the same time.

Note to Teacher If at the end of ten rounds, you want to extend the activity for a few more rounds, you should feel free to do so. Because the game will be played differently each time you play it, you should manipulate it any way you see fit. The more you play the game, the more you will discover how to mold it to fit the various situations.

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7. After the game concludes discuss the process with students. If students were blocked, were at an advantage or disadvantage, and/or were involved in negotiations at some point during the game, conclude with a discussion of the following:

- How does the game demonstrate the relationship between geography and politics? Can you provide "real life" examples of how geography and politics are related in the world today?
- What would have been necessary for each team to "win" the game? Did teams automatically cooperate or compete with one another? Why?
- When different teams wanted or needed the same square, how did they attempt to secure that square?
- In politics, there is often a problem between self-interest and the interests or good of all. How does the game demonstrate this problem?
- Were teams willing to negotiate? Why or why not? Did teams live up to the agreements struck during the negotiation sessions? Why or why not?
- How does Territorial Squares demonstrate the problems associated with territory and territorial expansion in the world today? How do you think these problems will get resolved?

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STUDENT PLANING SHEET

PURPLE

	A	B	C	D	E	F	G	H	I	J	
1											
2											
3											
4											
RED 5											BLUE
6											
7											
8											
9											
0											

GREEN

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Activity 5.2 International Environmental Politics

Introduction

The planet Earth and its atmosphere constitutes one unified ecosystem. This is to say that everything in the global environment is connected to everything else. Damage to any part of the ecosystem, in any place, inevitably results in damage to the whole. While environmental consciousness has begun to take form throughout the world, it is not keeping pace with global environmental destruction and degradation. One explanation is political. In general, policymakers and state decisionmakers rarely give much thought to the long-range environmental consequences of their decisions. Because short-term, self-interest thinking prevails throughout the world, environmental problems continue to expand. In this activity, students explore global environmental problems and the desirability for some form of collective political decisionmaking and action to begin to resolve the problems.

Objectives

As a result of participating in the activity, the student will be able to:

- Describe several global environmental issues or problems.
- Comprehend reasons why collective decision making, in the name of environmental problem solving, is difficult for the nations of the world today to achieve
- Evaluate the pros and cons of collective decision-making efforts designed to resolve global environmental problems.

Grade Level

9-12

Time

Two to three class periods

Materials

Handout 5.2.1, "Chasing the Hare"
Handout 5.2.2, "The Montevideo Conference"

Procedure

1. Begin the activity by providing a copy of Handout 5.2.1, "Chasing the Hare" to each student. Instruct students to read the scenario.

2. Ask students to suggest ways that the hunters might organize themselves to accomplish their goal. List the suggestions on the chalkboard. Discuss the strengths and weaknesses of the members of the group working together as a whole, in small groups, individually, and so on.

3. Tell students that the party decided to work together as a whole to accomplish their goal. However, there is the problem of the one member of the party who has spotted the hare. Ask students to discuss whether or not they think that he should chase the hare. List the reasons for and against chasing the hare on the chalkboard.

4. Ask students what this scenario has to do with international or global politics.

Note To Teacher

Students should understand that it is often difficult for nations to work together because of differences in immediate needs,

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differences in perceptions of problems, issues of trust, and so on. Students should understand the concepts of self-interest versus the common good, and short-term needs versus long-term sustainable needs.

5. Ask students to identify several examples of global environmental problems. For example: ocean pollution, pesticides, hazardous waste, acid rain, depletion of ozone layer, deforestation, desertification, extinction of species of plants and animals, carbon dioxide build-up, finite supplies of fresh water, and so on. Choose two or three of the problems and ask students to discuss the global social and political consequences of the problems. For example: hunger and malnutrition, environmental refugees, disease, maldistribution of wealth and power in the world, possibility of resource wars, water wars, land wars, food wars, and so on. Ask students to suggest ways that nations of the world might attempt to resolve the problems being discussed.

6. Divide students into small groups of four to five students each. Provide each student with a copy of Handout 5.2.2, "The Montevideo Conference." Instruct students to read the information on the handout.

7. After students have read the information, instruct them to discuss and list the possible global effects of hazardous waste production and dumping. Ask them to suggest an organizational structure for working on the problems of hazardous waste. Provide time for each group to report on its list of hazardous waste effects and suggested organizational structure.

8. Tell students that the delegates eventually chose a collective organization of all nations to work together to solve the problems of hazardous waste. However, there was the problem with the one nation pulling out to devote time and energy to its own immediate national problems. Instruct the groups to assume that they are representatives of that nation and to discuss whether or not they would withdraw from the group and why or why not.

9. Provide time for each group to make their case and to state their reasons for staying or withdrawing from the hazardous waste problem solving group. After each group has made its position known, allow for challenges and debate by the opposing sides, if any exist.

10. Conclude the activity by discussing the following:

- Can the environmental problems identified earlier be resolved by a few nations? Why or why not?
- If an environmental problem affects all nations, why is it difficult to get nations to sit down together to work out solutions to the problem?

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- There are both pros and cons of collective environmental problem solving. How do you view the process as a citizen of a developed country? How do you think you might see the problem if you were a citizen of an underdeveloped country?

- When do nations give up self-interest and short-term considerations for the interest of all and long-term considerations?

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CHASING THE HARE

A primitive hunting party, consisting of ten hungry persons, has tracked an elusive deer. After a long chase, both men and animal are tired. The men believe that a kill is near and nourishment soon at hand. However, before any satisfaction can be achieved, the party stops to organize in order to best ensure the slaughter of the deer. You are a member of the hunting party. What organizational recommendations would you make to the group in order to best ensure the goal of killing the deer?

Later

Having organized, the group is hoping for a kill. You, however, have spotted a small hare hopping between the trees and bushes. You are tempted to discontinue the hunt for the deer and chase the hare. Will you? Why or why not?

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THE MONTEVIDEO CONFERENCE

A group of world leaders, representing both the developed and developing countries of the world have gathered in Montevideo, Uruguay, to discuss the problem of hazardous waste. It is known that industrialized countries in Western Europe are sending 10,000 to 20,000 shipments of hazardous wastes every year to Eastern Europe for disposal and are seeking disposal sites in developing countries. As a delegate from one of the developing countries, you are interested in forming some sort of organizational structure to control the production and dumping of hazardous waste. What type of organization do you suggest?

Later

Having established an organization to address the problem of hazardous waste, the group is preparing to begin its task. You, however, as a representative of an industrialized country, realize that there is a strong demand from citizens in your country to devote the time and money allocated to hazardous waste, to more immediate problems facing the nation. You are considering withdrawing your nation from the hazardous waste group. Will you? Why or why not?

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Activity 5.3 **Cartoons, Geography, And World Views**

Introduction

Since 1747 when Benjamin Franklin included an illustration with a caption in his pamphlet Plain Truth, political cartoons have been powerful intellectual and political forces. In this activity students will explore the general nature of political cartoons and draw ones of their own.

Objectives

Upon completion of the activity, students will be able to:

- Identify the basic elements of a political cartoon.
- Create a cartoon which expresses one significant lesson learned during the geography unit.

Grade Level

9-12

Time

One class period

Materials

Handout 5.3.1, "Cartoons"
Handout 5.3.2, "Create Your Own Cartoon"
Drawing paper
Markers
Tapes

Procedures

1. Distribute Handout 5.3.1. Pose the following questions to the class about each of the cartoons in turn.

- What is the message of the cartoonist?
- How is geography expressed in the cartoon?

2. Ask students to take all the cartoons into consideration and to suggest elements they believe are common to all of them. List their responses on the chalkboard. Possibilities are: They each . . .

Convey a concise message

Reflect a strong opinion

Are stated in simple, strong terms

Communicate a political idea

Are overstatements or exaggerations

Make a pure, unequivocal statement

Simplify complex, critical issues

Have a geographic component

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3. Ask students to brainstorm a list of the most important issues, trends, facts, and lessons learned during the current unit. Write their responses on the chalkboard.

4. Distribute Handout 5.3.2. Read the directions aloud and ask for clarifying questions. Allow students to complete the assignment. (It is reasonable that students will not complete the task in class, making this a good homework assignment.)

5. Upon receiving the students' cartoons post them on a bulletin board with an appropriate title. (Perhaps the one from this activity.)

Follow-Up

Instruct students to evaluate each other's cartoons using the five elements from Handout 5.3.2 as criteria. This may be done orally or in a short written critique.

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CARTOONS

Tom Toles for *The Buffalo News*

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BEST AVAILABLE

CREATE YOUR OWN CARTOON

From the brainstormed list on the chalkboard, select one item about which you feel strongly and have the most knowledge. Write a speculative page on the item, raising questions, recording salient facts, remembering events, exploring relationships, etc. Using your writing as a source for ideas choose one aspect to develop into a cartoon which has geography as its central character.

Keep in mind the elements of political cartoons. Yours should reflect a strong opinion you hold based on knowledge gained during the current course of study.

1. Convey a concise message
2. Be overstated/exaggerated
3. Make a pure, unequivocal statement
4. Simplify a complex, critical issue
5. Have a geographic component

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Activity 5.4 Global Metaphors

Introduction

There are numerous issues which affect all humankind today. These issues need to be understood and resolved if we are to progress satisfactorily into the next century. In this activity, students are provided an opportunity to discuss the issues which they feel need most attention, and are asked to discuss ways for addressing the issues.

Objectives

Upon completion of the activity, students will be able to:

- Identify and discuss the global issues they think are most important.
- Understand that global problems are complex, interrelated, and subject to a variety of solution interpretations.

Grade Level

9-12

Time

Two class periods

Materials

Handout 5.4.1, "Global Metaphors"
Poster paper
Markers
Masking tape
A cardboard clock with movable hands

Procedure

1. Divide students into small groups of four to five persons each. Assign a student recorder in each group. The task of the student recorder is to record all ideas that are generated in the group and to write them on poster paper.

2. Tell students that their task will be to generate ideas, and that a "brainstorming" format will be used.

3. Write the following rules for brainstorming on the chalkboard. Review them with the students.

- Any idea (in good taste) is acceptable
- Do not criticize any idea
- Repetition is O.K.
- Adding on to ideas is encouraged
- Silence is golden

4. Provide each group with poster paper, markers, and tape. Give each person in the group a copy of Handout 5.4.1, "Global Metaphors."

5. Read Metaphor No. 1 to the group and demonstrate the time examples in the metaphor by using the cardboard clock. Allow 10 minutes for the group to discuss the question posed in the metaphor.

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Remind the recorder to write the student statements on the poster paper.

6. Repeat the group process for metaphors 2 and 3.

7. Once students have discussed each of the metaphors, collect all the poster papers by category and post them where students can see the information. Again read each metaphor and review the student responses. If there are groups who disagree, ask for a presentation of views and encourage a discussion on the points of disagreement.

8. After concluding the review of Metaphor No. 3, ask students to discuss what personal responsibilities they have for the issues, and to identify ways that they might constructively get involved in the resolution of the issues.

Follow-Up

Although the activity is intended to get students to think about global issues and possible solution strategies, the ideas generated in the groups can also form the basis of numerous other activities. As an example, students might want to collect specific examples of information that relate to the issues they have identified as well as solution strategies that are being currently employed.

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GLOBAL METAPHORS

Metaphor 1.

If the history of planet Earth were compressed into a period of 24 hours, the following would have taken place:

The universe was formed in less than a ten billionth of a second past 12:00 a.m.
Stable atoms formed at 4 seconds past 12:00 a.m.
Stars and galaxies formed at about 5:00 a.m.
Our solar system formed at about 6:00 p.m.
The first vertebrates crawled on land at about 10:30 p.m.
Dinosaurs walked on Earth from 11:35 - 11:56 p.m.
Our ancestors walked upright at 10 seconds until midnight
The industrial revolution and the modern age occupy less than the last 1/1000 of a second.

Given this view of the Earth's history, develop a list of what you consider to be humankind's greatest accomplishments in this last 1/1000 of a second.

Metaphor 2.

The relationship between humankind and the planet Earth has recently been compared to the relationship between a cancer cell and the human body. The cancer cell is unusually energetic and reproduces itself with great vigor. At the same time, however, it destroys the host body upon which it depends for survival.

Do you agree or disagree that humankind is doing harm to the planet? If you agree, list the ways that humankind is abusing the earth. If you disagree, develop a metaphor that represents your view of the issue.

Metaphor 3.

In France, a group of school children performed an experiment in which they dropped a frog into a pan of boiling water. The frog immediately jumped out, rejecting the hostile environment. Later the children placed a frog into a pan of cold water and slowly heated it. The frog swam around the pan adapting itself to the rising heat until it boiled to death.

There are those who say that humankind must not adapt to the many changes taking place in today's world and should, like the first frog, take immediate corrective action in order to remain alive. Do you agree or disagree with this view? If you agree, what problems do you feel need the most immediate attention? If you disagree, develop a metaphor that represents your view of the issue.

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Revised each year. Since 1941, this source has summarized, recorded and indexed the news of the nation and the world. Each annual includes 52 weekly news digests that are approximately 15 pages each.

Kaleidoscope
ABC-CLIO
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Biweekly. Links today's events and issues to the nation's past and future. Grades 8 - 12.

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Gary McCuen (ed.)
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Each volume treats one topic that is broken into four or more key questions.

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